Introducing the IP Server

Initial Requirements

Com Ports:- (Representative Port Numbers Only....Replace with your own Port Numbers.....)

Sign up Port = 17001 / Same as **Set-up Port** & **Parameter Port**.

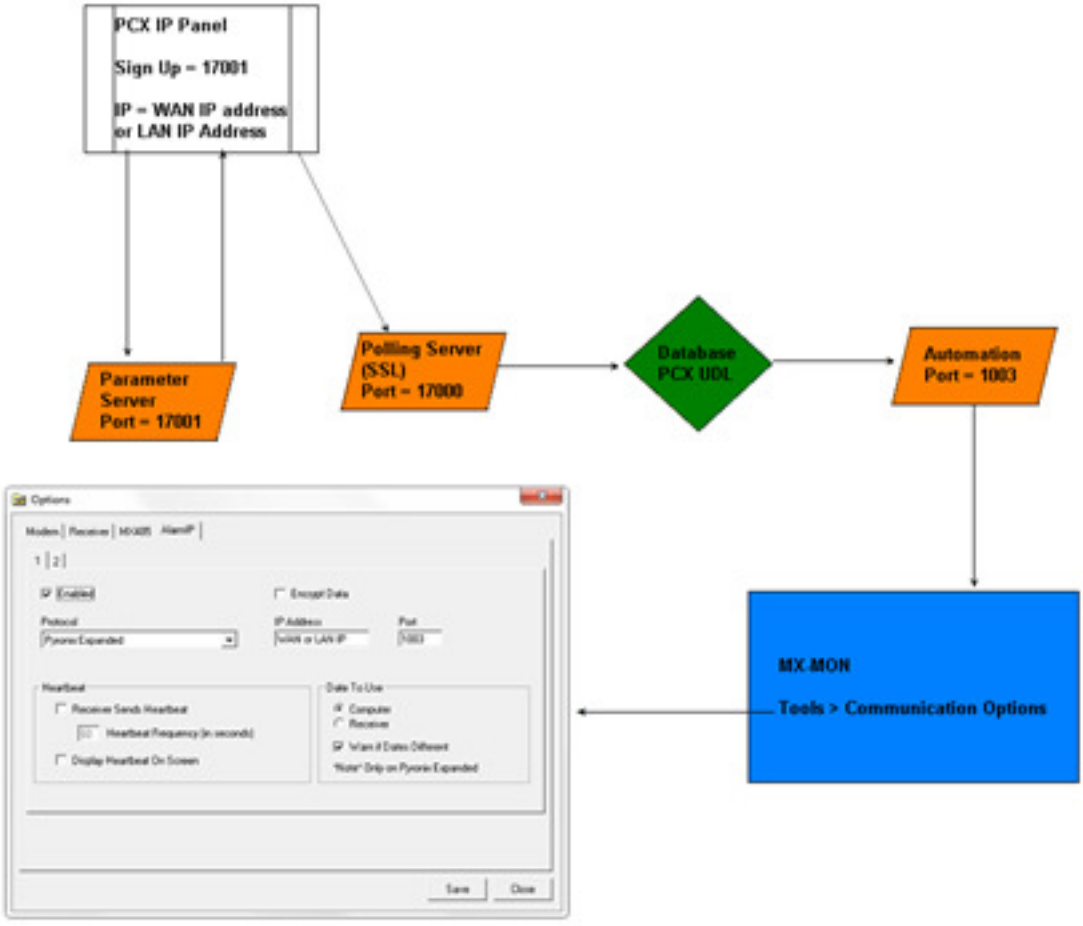
SSL Port / **(Polling Port)** = 17000 / Same as **Alarm Servers Port** in **Parameter Server Options**.

UDP Port = 17002

Automation Port = 1003

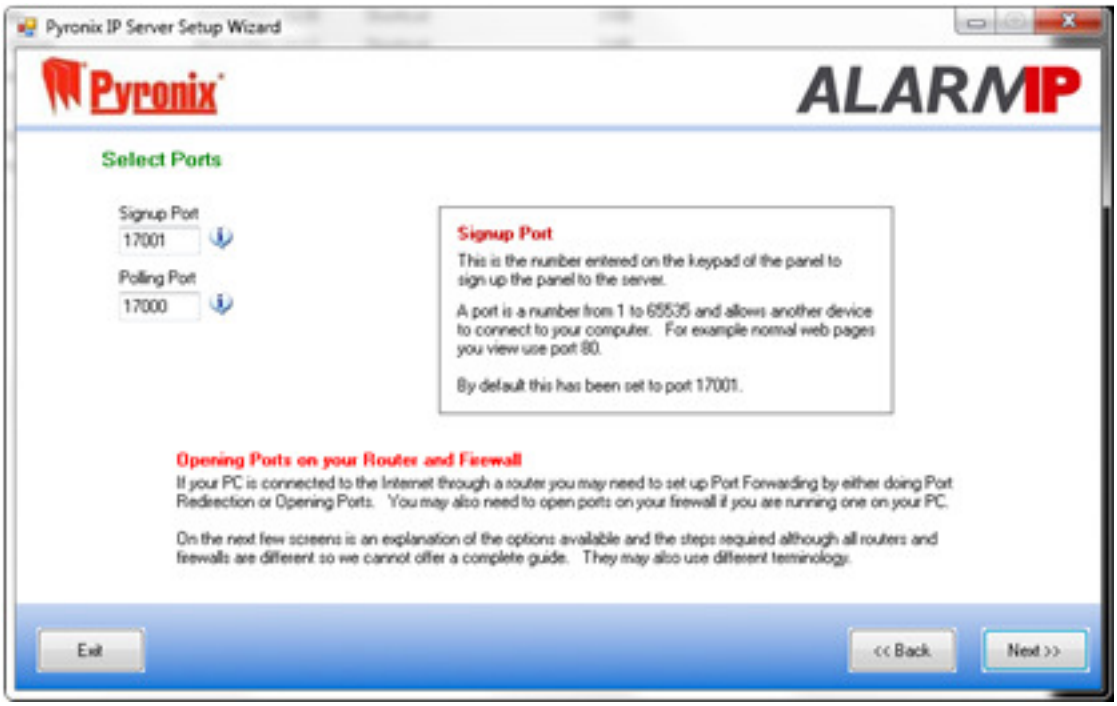
IP Addresses = WAN 192.168.0.1 / LAN10.10.10.01 / (Wide area network / Local area network).

(Representative IP Addresses Only....Replace with your own IP Addresses.....)

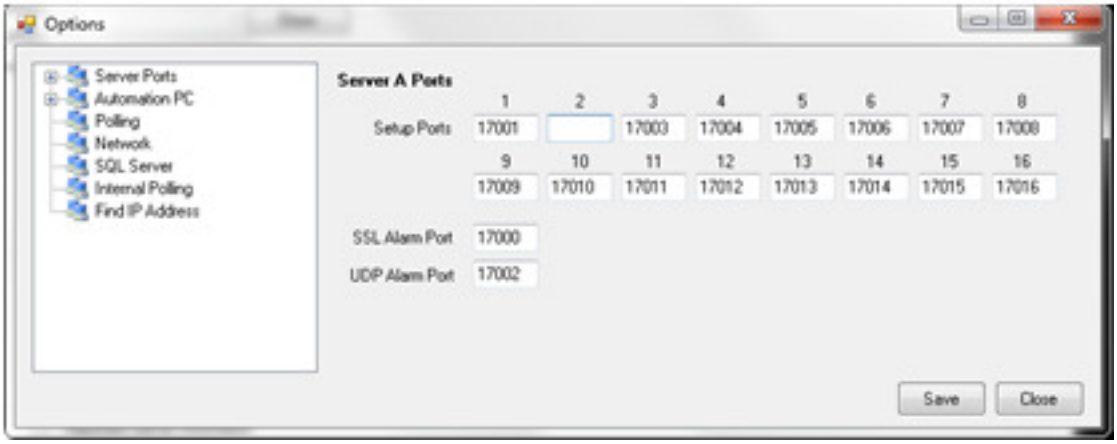

PCX IP Panel
Sign Up = 17001
IP = WAN IP address or LAN IP Address
Parameter Server Port = 17001
Polling Server (SSL) Port = 17000
Database PCX UDL
Automation Port = 1003
MX-MON
Tools > Communication Options

Ports and IP as displayed on relevant screens…..

During Alarm IP Wizard

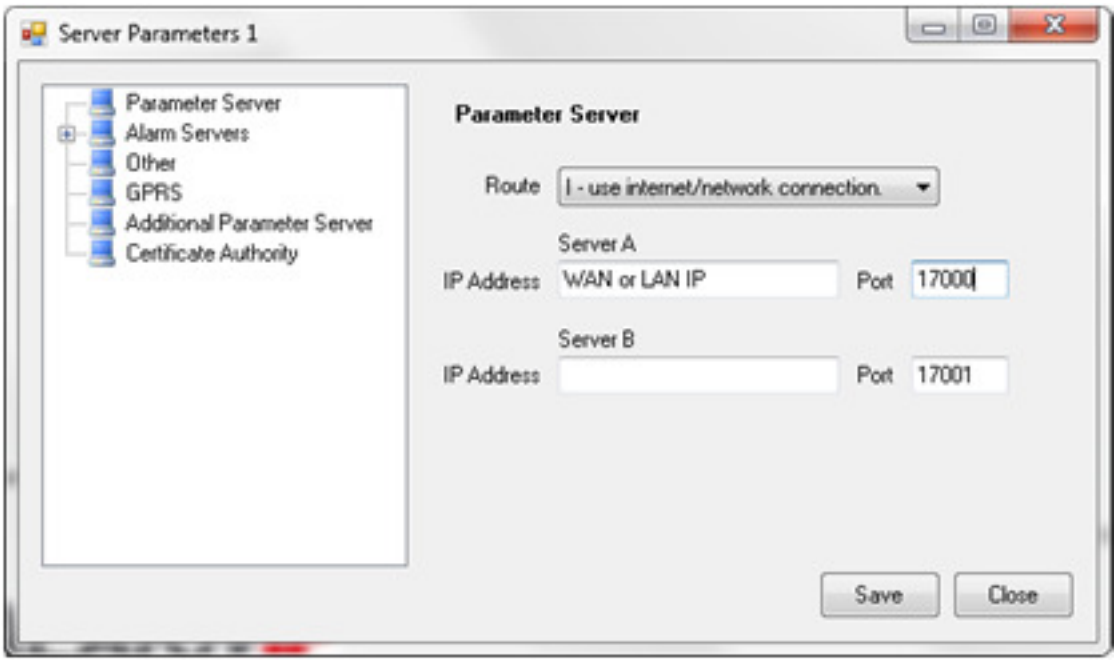

Pyronix IP Server Setup Wizard
Pyronix
ALARMP
Select Ports
Signup Port
17001
Polling Port
17000
Signup Port
This is the number entered on the keypad of the panel to sign up the panel to the server.
A port is a number from 1 to 65535 and allows another device to connect to your computer. For example normal web pages you view use port 80.
By default this has been set to port 17001.
Opening Ports on your Router and Firewall
If your PC is connected to the Internet through a router you may need to set up Port Forwarding by either doing Port Redirection or Opening Ports. You may also need to open ports on your firewall if you are running one on your PC.
On the next few screens is an explanation of the options available and the steps required although all routers and firewalls are different so we cannot offer a complete guide. They may also use different terminology.
Exit
<< Back
Next >>

Setup > Server options

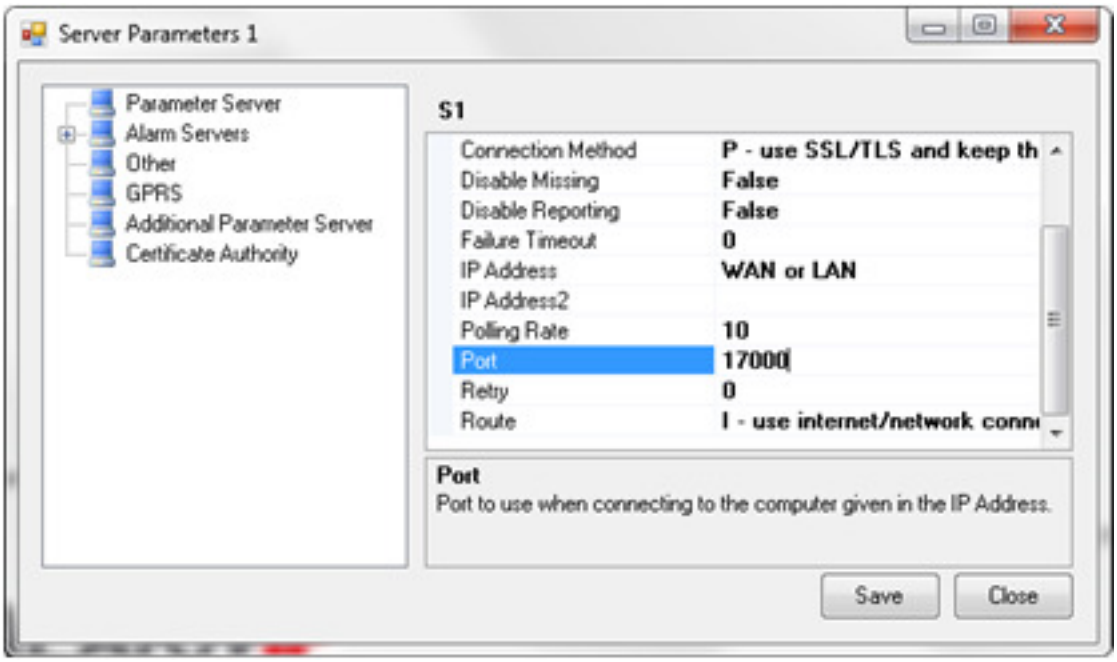


Setup > Server options > Automation PC

Setup > Server options > Server Parameters > Setup Server parameters 1



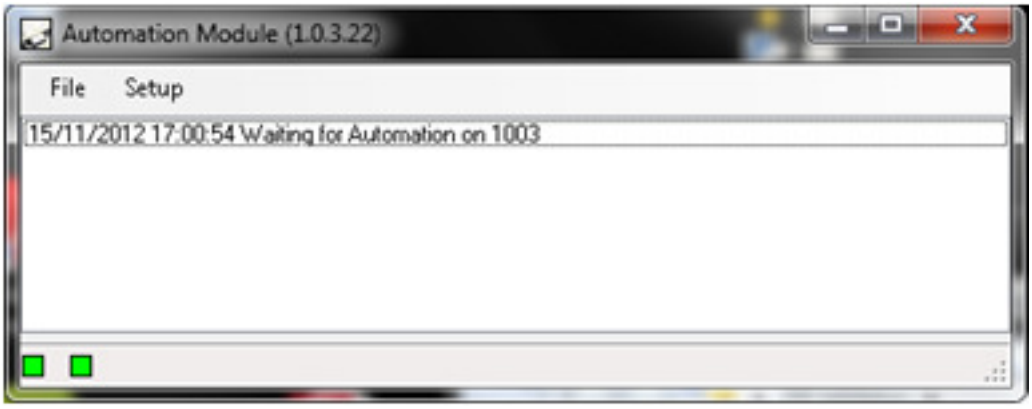
Setup > Server options > Server Parameters > Setup Server parameters 1 > Alarm Servers > Server A Path 1



Pyronix IP Polling Server Screen

Pyronix Alarm IP Server (2.0.0.39)
15/11/2012 14:16:37 (c) Pyronix Limited 2005-2012
15/11/2012 14:16:37 Initialising Server
15/11/2012 14:16:37 .NET Framework 2.0.50727.5456
15/11/2012 14:16:37 Close button disabled, to close use Windows Task Manager
15/11/2012 14:16:37 Setting Server Parameters
15/11/2012 14:16:37 Setting SQL Connection
15/11/2012 14:16:37 Verifying Certificates
15/11/2012 14:16:37 Setting Timezone Information
15/11/2012 14:16:37 Set up Timezone information
15/11/2012 14:16:37 ------------------------
15/11/2012 14:16:37 Displaying PC Information
15/11/2012 14:16:37 LAN Address Information
15/11/2012 14:16:37 Host Name: SIRAJJ-M11-I7
15/11/2012 14:16:37 IP Address 0: fe80::1e6:9438:5818:6e02x10
15/11/2012 14:16:37 IP Address 1: 10.10.10.250
15/11/2012 14:16:37
15/11/2012 14:16:37 WAN Address Information
15/11/2012 14:16:37 Contacting pyronix.com to get IP address
15/11/2012 14:16:37 Unable to retrieve information
15/11/2012 14:16:37 ------------------------
15/11/2012 14:16:37 Opening Ports
15/11/2012 14:16:37 Starting Command Check
15/11/2012 14:16:37 Server Ready
15/11/2012 14:16:37 TCP Port open on 17000

Automation module > Start



YOUR Details…..

Site Name =_____

Insert your ‘Port settings’ and ‘IP Address’s’ for Reference

Sign up Port / Setup Port / Parameter =_____

SSL Port / Polling Port / Alarm servers Port = _____

UDP Port = _____

Automation Port = 1003 / _____

IP Address = WAN = _____

LAN = _____

NOTES:-

Print / Save Page 5 to Use / Store…..

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2.2.4 Polling Path Options 14
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1. Detailed Installation

1.1 Installing Alarm IP Server From www.pyronix.com

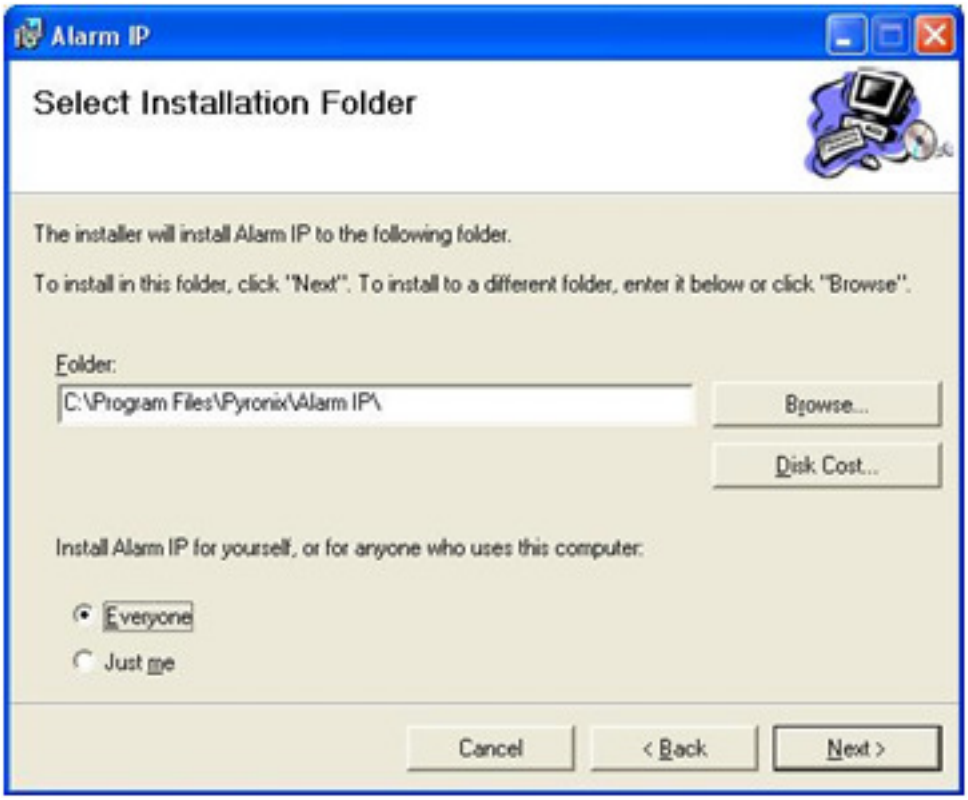
Unzip the file **Pyronix Alarm IP Server.zip**. The directory **Pyronix Alarm IP Server** is created. Run the file **setup.exe**. This will install the software.

During the installation the following software may also be installed.

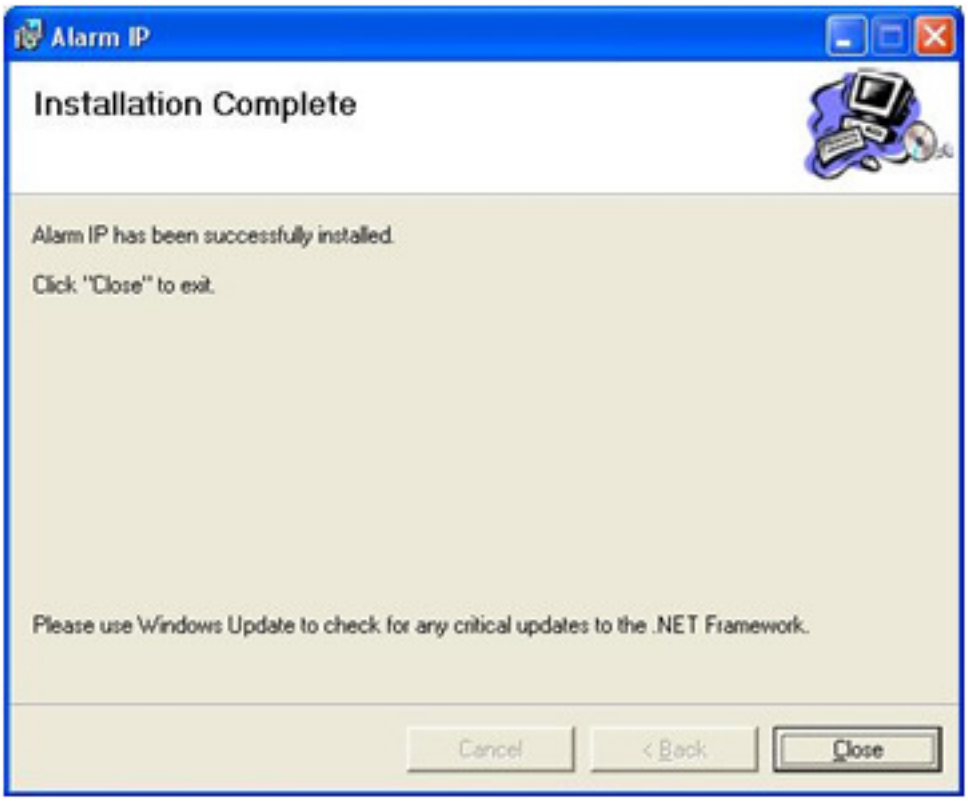
.NET Framework 3.5 SP1

Please Note: After installing .NET Framework 3.5 a reboot of the PC will be required. If you have a previous version of the IP Server installed this will run when the PC is rebooted, please close this software before continuing with the install. You may also get an installation failure and the install will exit, to correct this just rerun **setup.exe** and the installation will continue.

Press **Accept** if this software is required. Please ensure that there is an active internet connection as this software will be downloaded and installed from Microsoft. The installation of this software is automated and requires no user interaction.


Alarm IP
Select Installation Folder
The installer will install Alarm IP to the following folder.
To install in this folder, click "Next". To install to a different folder, enter it below or click "Browse".
Folder:
C:\Program Files\Pyronix\Alarm IP\
Browse...
Disk Cost...
Install Alarm IP for yourself, or for anyone who uses this computer:
Everyone
Just me
Cancel
< Back
Next >

Select the installation Folder to install the software. To avoid any compilation use the default folder provided however the software can be installed in any location. Press **Next >** to continue.


Alarm IP
Installation Complete
Alarm IP has been successfully installed.
Click "Close" to exit.
Please use Windows Update to check for any critical updates to the .NET Framework.
Cancel
< Back
Close

Press **Close** to complete the installation.

1.2 Installing SQL Server Express 2008

Microsoft SQL Server Express 2008 can be downloaded from the following web address:

http://www.microsoft.com/en-us/download/details.aspx?id=23650

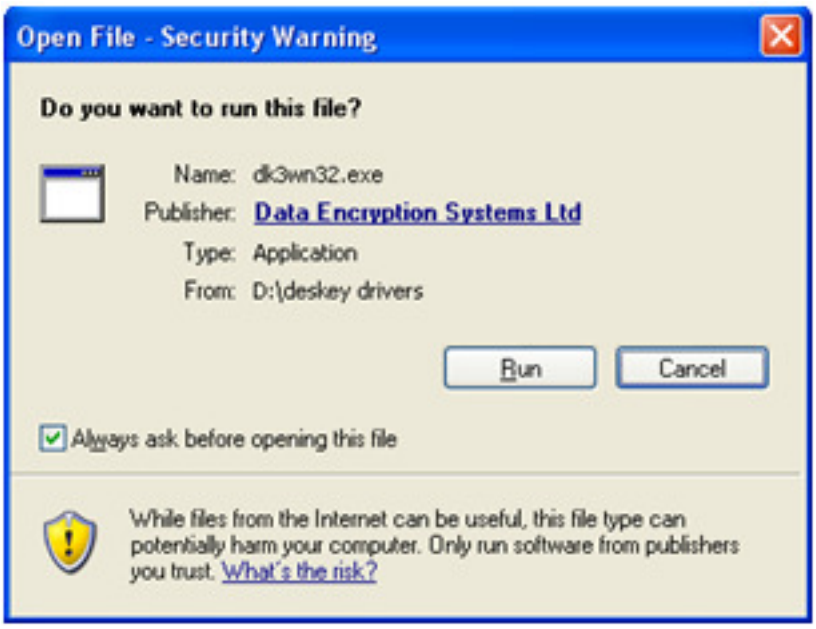
Full installation instructions are available on this web site.

1.3 Installing DESKEY

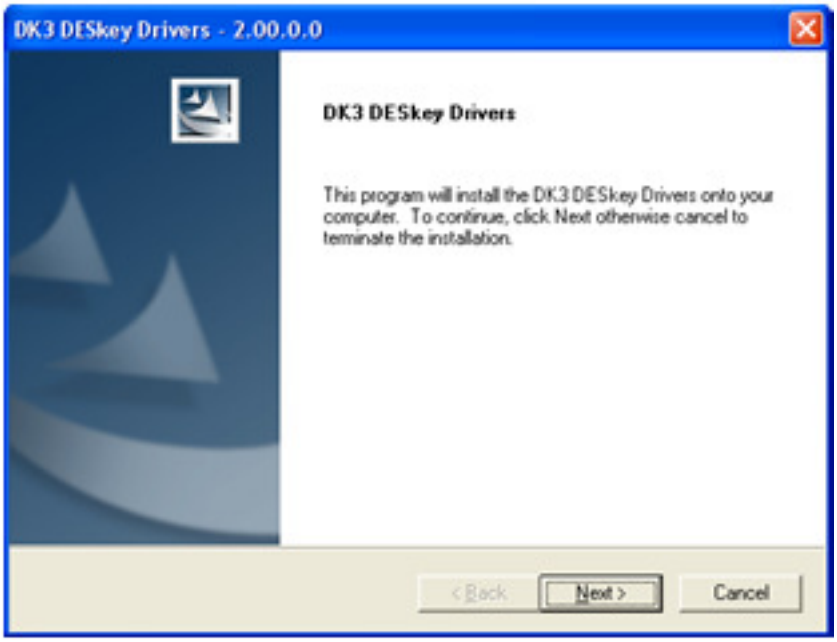
The Alarm IP Server requires a DESKEY software protection dongle to be inserted in to the PC at all times. This device comes as either a Parallel or USB device.

You can install the latest version of the driver for this device from:

http://www.pyronix.com/download-pip.php


Open File - Security Warning
Do you want to run this file?
Name: dk3wn32.exe
Publisher: Data Encryption Systems Ltd
Type: Application
From: D:\deskey drivers
Run
Cancel
Always ask before opening this file
While files from the Internet can be useful, this file type can potentially harm your computer. Only run software from publishers you trust. What's the risk?

Press **Next >** followed by **Finished**.


DK3 DESkey Drivers - 2.00.0.0
DK3 DESkey Drivers
This program will install the DK3 DESkey Drivers onto your computer. To continue, click Next otherwise cancel to terminate the installation.
< Back
Next >
Cancel

2. Getting Started

The complete IP Server includes 5 pieces of software. Each one has its own icon on the desktop.

Pyronix Alarm IP Automation
Pyronix Alarm IP Server
Pyronix Alarm IP Paramet...
Pyronix Alarm IP Polling E...
Alarm IP UDL Server

In order to sign up and receive events from a panel the Parameter and Polling Server software must be running.

In order to report missed polling events the Alarm IP Server software must be running.

In order for the Alarm IP Server to report software to an automation computer the Automation software must be running.

Alarm IP Server
This application allows the viewing of the panels on the server and also controls all the settings for the other applications. This application must be running in order for the server to report missed polling events.

Alarm IP Parameter Server
This application sends out all the parameters to panels that connect. This application must be running in order for panels to register with the server successfully.

Alarm IP Polling Server
This application receives all the polling and event reporting information from connected panels.

Alarm IP Automation
This application sends out all the received events from panels to a piece of Automation software like MXMON.

Alarm IP UDL Server
The UDL Server provides a link between the panel and the Insite Upload/Download software from Castle Care-Tech.

2.1 Launching the Server

This section will describe how to set up a single server solution for the Alarm IP Server. However the best configuration of the server is for there to be 2 servers on the system which provided backup for each other, section 6 will describe how to setup the 2nd server.

To start the software double click on the Pyronix Alarm IP Server icon on the desktop.

The software will start with the screen shown below. If the server has already been configured a countdown of 15 seconds will begin and the server will start automatically.

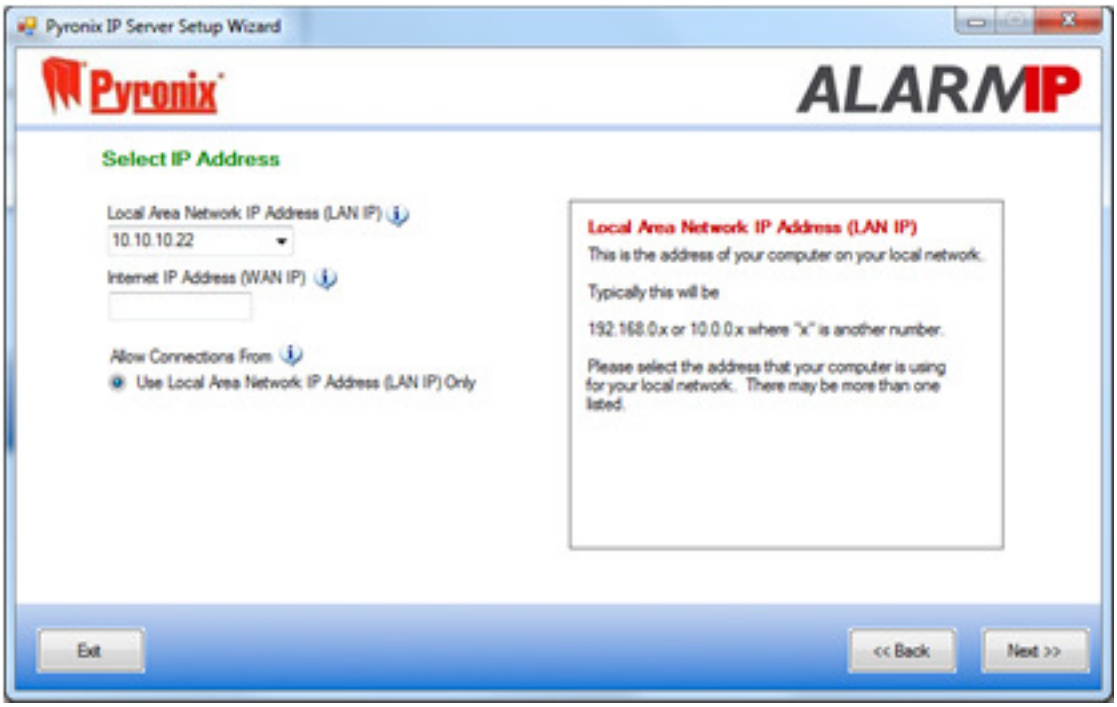
Pyronix IP Server Setup Wizard
Pyronix
ALARMP
Welcome to the Pyronix IP Server
The following screens will allow the set up of the PIP Server as a 2 path server.
You will be able to set up Primary and Secondary paths for receiving polling and event information.
The system uses SSL Certificates and this setup will guide you through the creation of these whilst explaining each step as you create your server.
More advanced options are available by selecting the Options menu from within the PIP Server.
If you have already set up your server you can skip this setup by pressing the Start Your Server button.
Server A (Main)
Server B (Backup)
Setup Server
Start Server
12
Exit

2.2 Configuring Server

Press Setup Server to be taken through a series of screens to enter information required to run the server software.

2.2.1 Server IP Address

The first screen will ask you to confirm the IP address information that the software has detected.


Pyronix IP Server Setup Wizard
Pyronix
ALARMP
Select IP Address
Local Area Network IP Address (LAN IP)
10.10.10.22
Internet IP Address (WAN IP)
Allow Connections From
Use Local Area Network IP Address (LAN IP) Only
Local Area Network IP Address (LAN IP)
This is the address of your computer on your local network.
Typically this will be
192.168.0.x or 10.0.0.x where "x" is another number.
Please select the address that your computer is using for your local network. There may be more than one listed.
Exit
<< Back
Next >>

The options presented are as follows

Use Local Area Network IP Address (LAN IP) Only – With this option selected even if you have an internet connection, only panels within the local network will be allowed to poll the server.

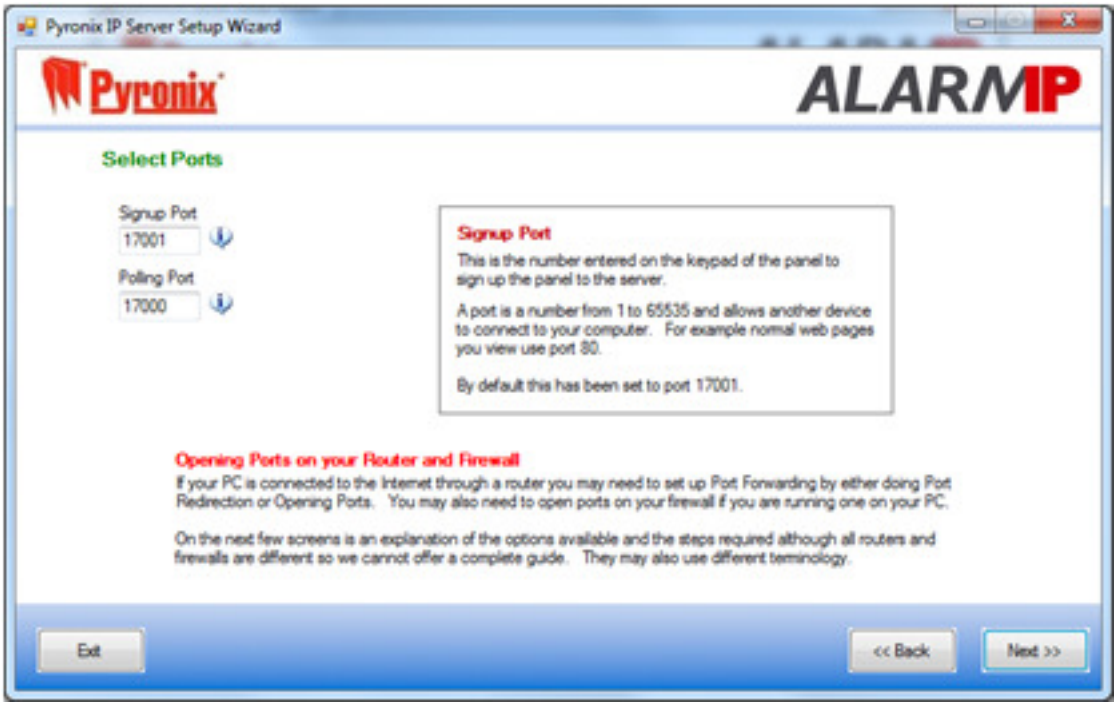
Use Internet IP Address (WAN IP) Only – With this option selected only panels connecting to the server from an internet connection will be allowed to poll the server.

Use both LAN and WAN IP – This is the recommended setting, with this panels from both the LAN and WAN will be able to connect. This will allow customer panels on the internet to poll the server but also allow local panels to connect for testing purposes. If you have a panel to connect on your LAN you use the LAN IP address of the server, but panels outside of the LAN on the internet use the WAN IP address.

Note, if you do not have an internet connection then only the LAN IP option will be displayed.

2.2.2 Server Ports

Before a panel can poll and report events to the server it has to sign up to the server and receive a set of parameters so that it knows where to report to.


Pyronix IP Server Setup Wizard
Pyronix
ALARM
Select Ports
Signup Port
17001
Polling Port
17000
Signup Port
This is the number entered on the keypad of the panel to sign up the panel to the server.
A port is a number from 1 to 65535 and allows another device to connect to your computer. For example normal web pages you view use port 80.
By default this has been set to port 17001.
Opening Ports on your Router and Firewall
If your PC is connected to the Internet through a router you may need to set up Port Forwarding by either doing Port Redirection or Opening Ports. You may also need to open ports on your firewall if you are running one on your PC.
On the next few screens is an explanation of the options available and the steps required although all routers and firewalls are different so we cannot offer a complete guide. They may also use different terminology.
Exit
<< Back
Next >>

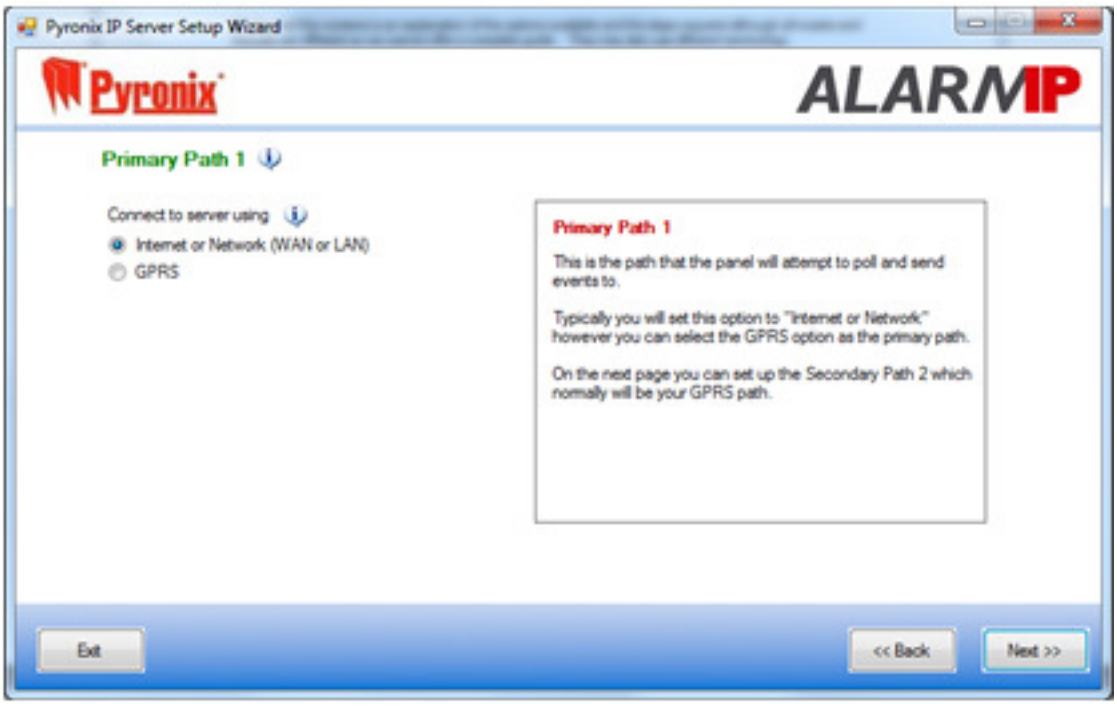
The Setup Wizard sets up the server for single Signup Port. The default is 17001. You can set up to 16 different signup ports using more advanced options within the software. Multiple signup ports are used to allow panels with different mobile phone networks to connect to the server, it can also be used to set up different grades or polling rates to the server.

The Polling port which by default is 17000 is used by the panels to poll and send events to the server once it has been signed up to your server.

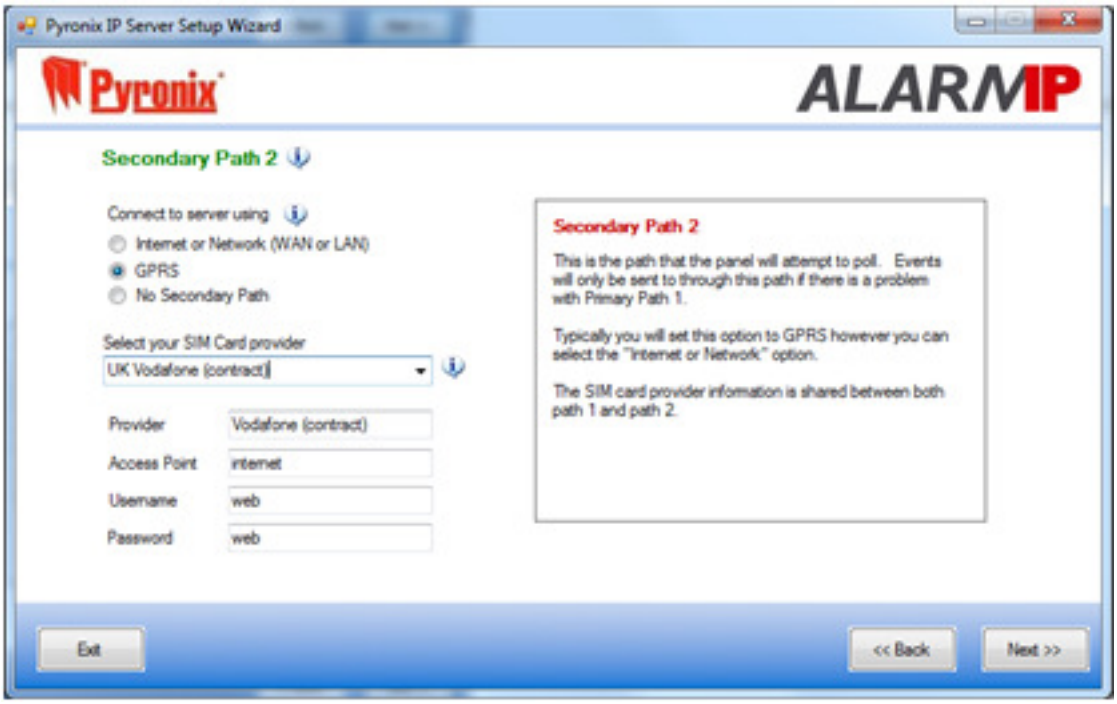
Note that these ports can be change to suit your network.

2.2.3 Setting Primary Path 1 and Secondary Path 2

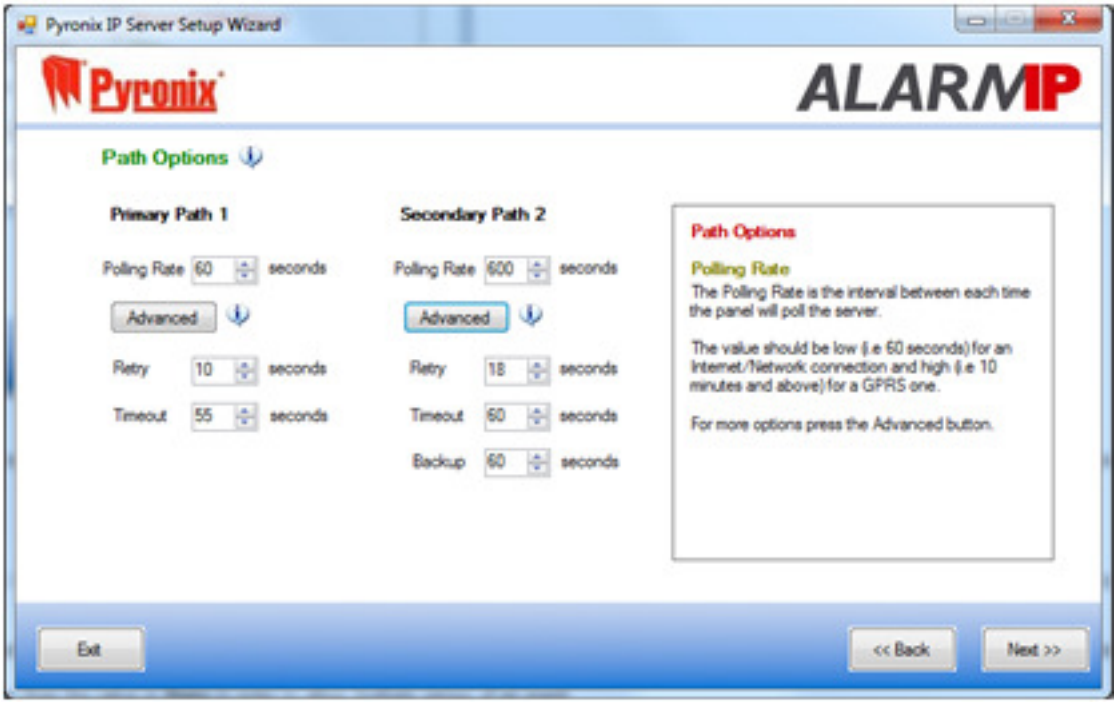
Path 1 is typically Internet or Network (WAN or LAN) and Path 2 is GPRS.


Pyronix IP Server Setup Wizard
Pyronix
ALARMP
Primary Path 1
Connect to server using
Internet or Network (WAN or LAN)
GPRS
Primary Path 1
This is the path that the panel will attempt to poll and send events to.
Typically you will set this option to "Internet or Network" however you can select the GPRS option as the primary path.
On the next page you can set up the Secondary Path 2 which normally will be your GPRS path.
Exit
<< Back
Next >>

If GPRS is selected the SIM Card details need to be entered. A list of known GPRS server details from around the world are included, if the provider required isn't in the list then enter in the details. It is through multiple Sign Up ports (up to 16) that different SIM Cards can be accommodated in the server.


Pyronix IP Server Setup Wizard
Pyronix
ALARMP
Secondary Path 2
Connect to server using
Internet or Network (WAN or LAN)
GPRS
No Secondary Path
Select your SIM Card provider
UK Vodafone (contract)
Provider
Vodafone (contract)
Access Point
internet
Username
web
Password
web
Secondary Path 2
This is the path that the panel will attempt to poll. Events will only be sent to through this path if there is a problem with Primary Path 1.
Typically you will set this option to GPRS however you can select the "Internet or Network" option.
The SIM card provider information is shared between both path 1 and path 2.
Exit
<< Back
Next >>

2.2.4 Polling Path Options


Pyronix IP Server Setup Wizard
Pyronix
ALARMP
Path Options
Primary Path 1
Polling Rate 60 seconds
Advanced
Retry 10 seconds
Timeout 55 seconds
Secondary Path 2
Polling Rate 600 seconds
Advanced
Retry 18 seconds
Timeout 60 seconds
Backup 60 seconds
Path Options
Polling Rate
The Polling Rate is the interval between each time the panel will poll the server.
The value should be low (i.e 60 seconds) for an Internet/Network connection and high (i.e 10 minutes and above) for a GPRS one.
For more options press the Advanced button.
Exit
<< Back
Next >>

Polling Rate
How often the alarm system contacts the computer specified with 'keep-alive' or 'heartbeat' messages. Value is delay between contacts in seconds. A value of zero indicates these messages are not to be sent.

Advanced Options

Retry
Retry timeout in seconds for the computer specified. When the alarm system reports an event, and it does not get a response from the computer within the time given in this parameter, it will re-send the event.

Timeout
Failure timeout in seconds for the computer specified. When the alarm system reports an event, and it does not get a response indicating successful processing of the event within the time given in this parameter, it will assume failure and try another computer if available.
Note : The value specified in ***Failure*** should be higher than the value in ***Retry*** in order to allow multiple retries of an event.

Backup Poll
In the event of the main polling path going down the panel will revert to this value for the polling rate.

2.2.5 Creating the Server Certificates

The Transport Layer Security (TLS) and its predecessor, Secure Sockets Layer (SSL), provide secure communications over the internet.

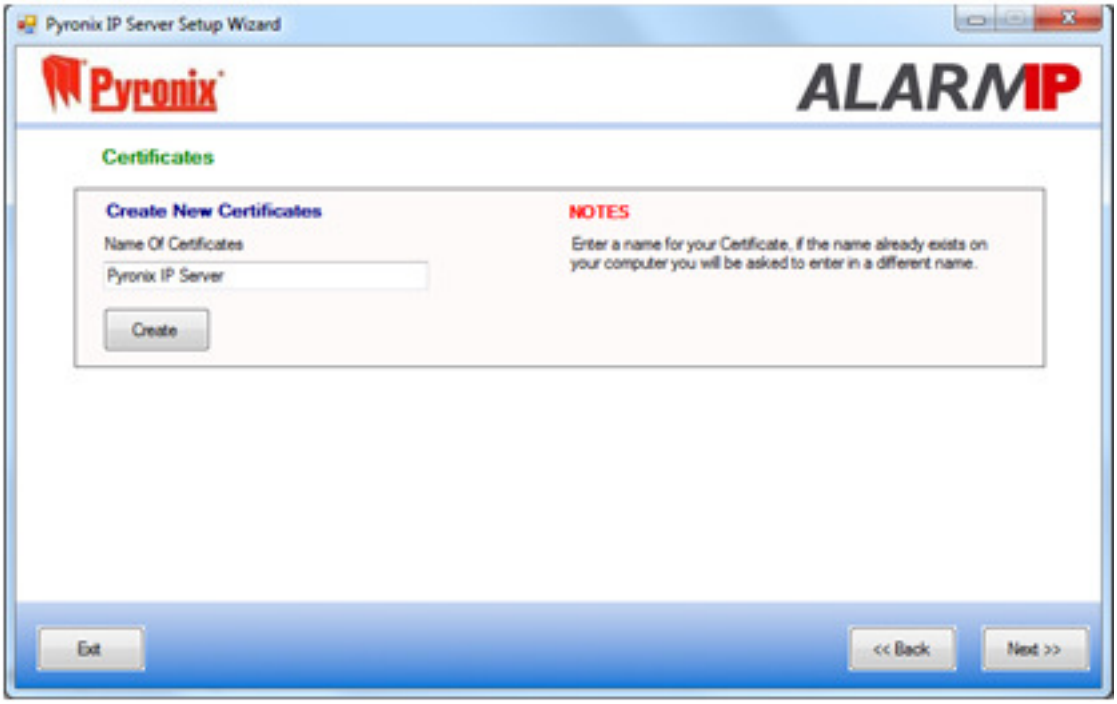
It is this protocol that is used by all secure web pages like shopping sites and banks. When you visit some websites to you may notice that the web address has https:// in the url, this means you have a secure connection to the website. The Alarm IP Protocol also uses TLS/SSL and digital certificates to provide the most secure connection between the control panel and server available.

The control panel has built into it a certificate provided by the manufacturer, at a later stage of this installation this certificate will be installed.

When creating certificates using the setup wizard there are 2 options, the option to Create New Certificates or Import Existing Certificates.

2.2.5.1 Creating New Certificates

Use this option when creating a new server. By default the name for the certificate is "Pyronix IP Server", this can be changed to something different but the name must not exist in the certificate store of the computer.

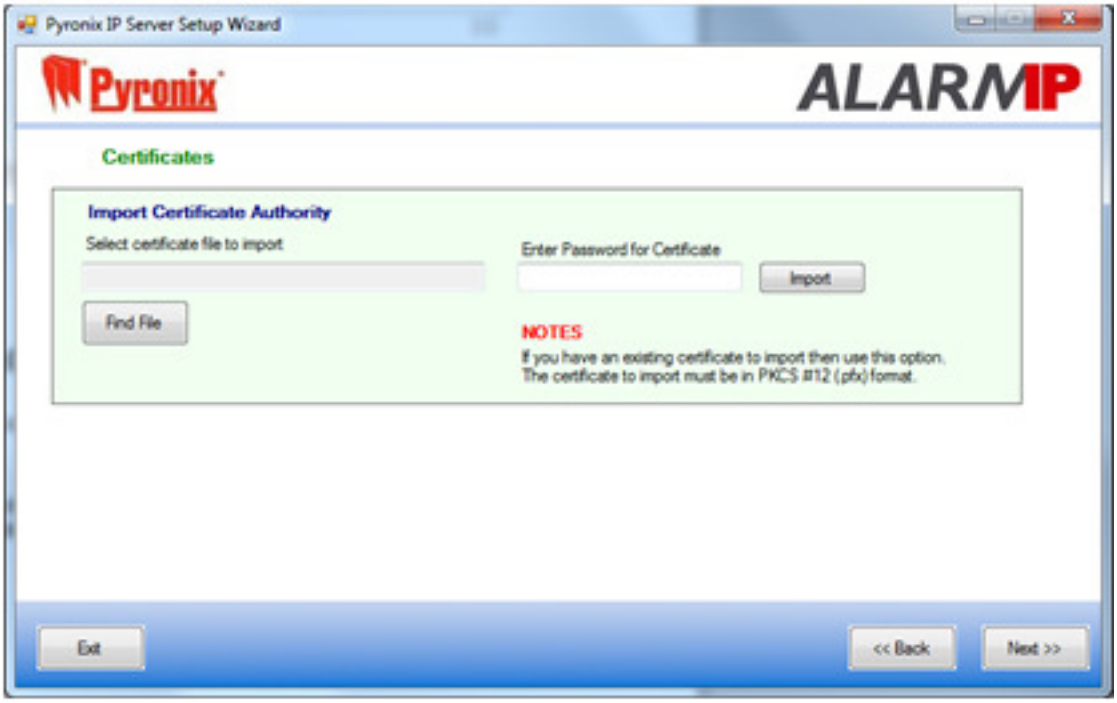


Press **Create** to make the certificate.
If the certificate has been created then the following message is displayed, press OK and then Next >> and move onto the section 2.2.5.3.

2.2.5.2 Importing Existing Certificates

Use this option is you already have a certificate file. This file must be in PKCS #12 format, typically this will have a .pfx file extension.

Use Find File to load the file from the computer and provide the password from the file. This certificate will be used to create the certificates for use with the server.



2.2.5.3 Creating Backups of the Certificates

After creating the certificate it is important to make a backup of the certificate. This will allow the ability to copy the certificate to a new computer recreate the server so that panels signed up to the server can continue to poll uninterrupted.

Creating a backup is the most important part of setting up the server.

To backup the certificate complete the following steps on the screen shown on the next page.

1. Enter a password for the certificate. Remember this password as it will be needed to load the certificate.
2. Press Create Backup
3. Copy the file from the location shown onto another device such as a CD, DVD or USB. It might be an idea to create multiple copies.
4. Keep this copy of file safe, and do not disclose it to anyone.

On the next page is a screen shot showing the information provided by the software.

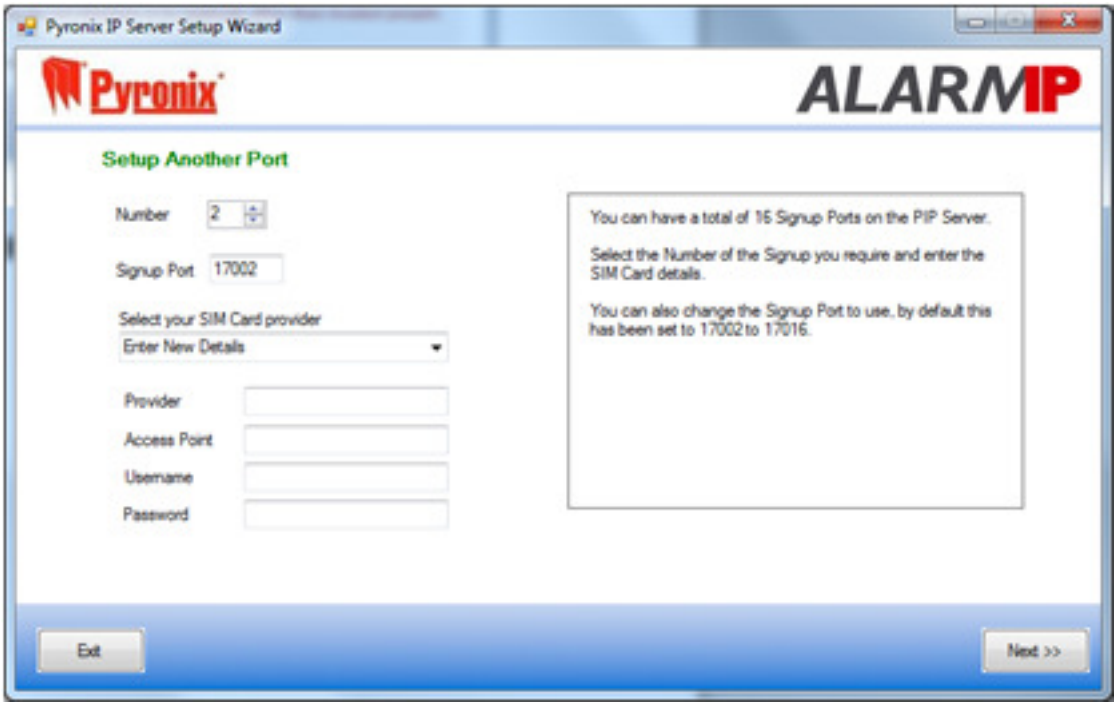
Pyronix IP Server Setup Wizard
Pyronix
ALARMP
Certificates Backup
** IMPORTANT **
You must backup your Certificate Authority file.
Enter a Password to protect your certificate
pyronix
Create Backup
The File
PyronixIPServerManual81490_CA.pfx
has been created in your My Documents folder.
Important Note:
Please ensure you copy this file to another device (CD, DVD, USB Device or Computer) and keep the file safe.
Also remember the password that you entered above, this will be required to install your certificate onto another computer. But keep this password safe and do not disclose is to anybody other than trusted people.
Tick this box to confirm that you have completed the backup of the Certificate Authority.
Exit
<< Back
Next >>

2.2.6 Creating another Signup Port

After creating the certificates a number of information screens are displayed and then more sign ups ports can be created.

The idea for this is that multiple SIM Cards can be supported in the panels connected to the server as not all panels will potentially use the same mobile phone operator.

Press Yes to create another sign up port.

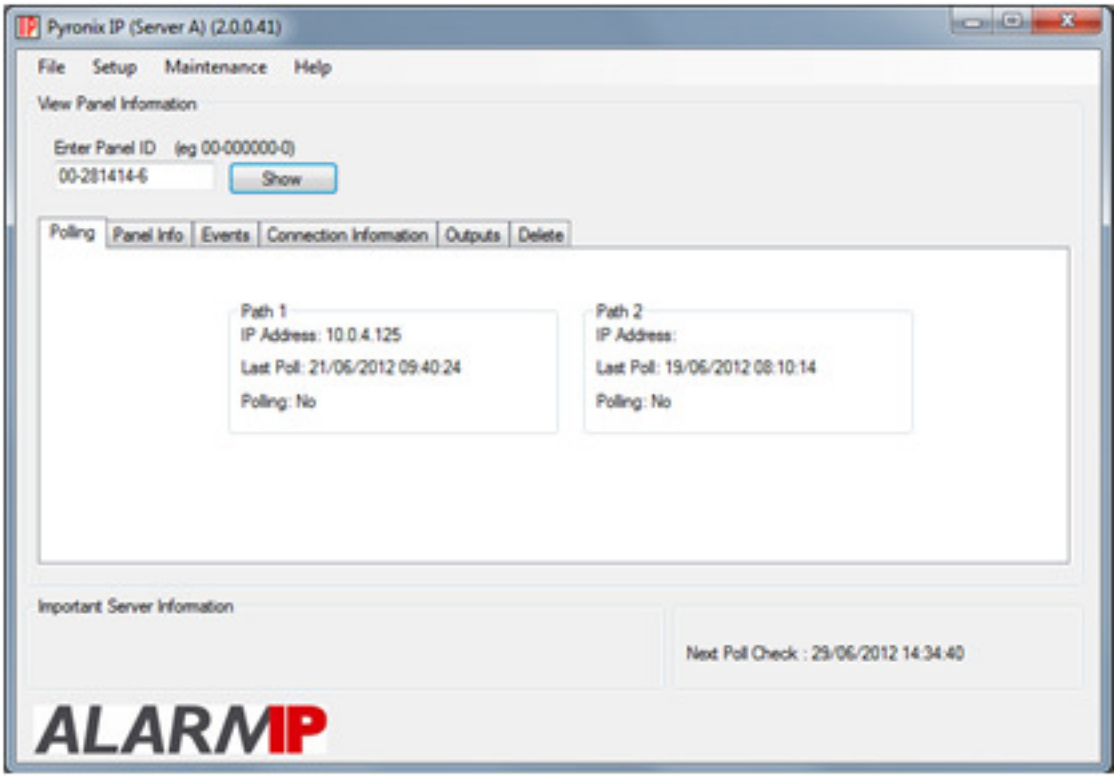

Pyronix IP Server Setup Wizard
Pyronix
ALARMP
Setup Another Port
Number
2
Signup Port
17002
Select your SIM Card provider
Enter New Details
Provider
Access Point
Username
Password
You can have a total of 16 Signup Ports on the PIP Server.
Select the Number of the Signup you require and enter the SIM Card details.
You can also change the Signup Port to use, by default this has been set to 17002 to 17016.
Exit
Next >>

3. Alarm IP Server

3.1 Main Alarm IP Server Application

The Main Application controls all the programming for the Server and does all the reporting of missed polling. A Deskey is required to be inserted into the PC in order for missed polling to be reported.

To run this application, double click on the **Pyronix Alarm IP Server** icon on the desktop.



Panel Information
Enter in a valid Panel ID to view the polling information for that panel. The Panel ID is in the format 00-000000-0.

Included in this is information for the 2 paths, the panel type, and the last 50 received alarm events. This information is in the raw reporting format, to view decoded use Automation software.

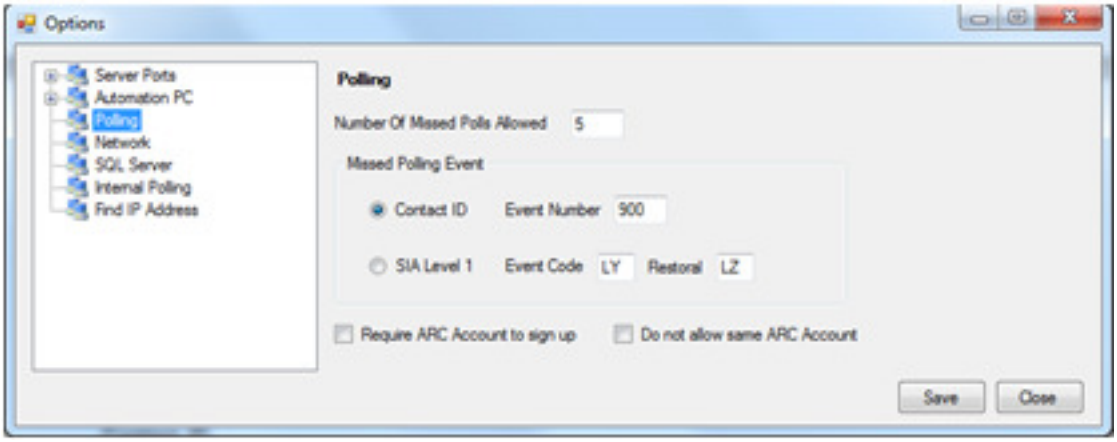
Also shown is the Parameter Server used by the panel, to get the panel to contact that server press **Contact**. To view the parameters for that server press **View**, please note that the parameters may have been changed since the panel signed up so they may not be the same values as sent to the panel.

When an IPCOMM is used the Connection Information and Outputs options become available. The IPCOMM has 3 outputs and these can be controlled from this application.

A panel can be deleted from the server by using the Delete tab. To delete the panel the panel ID must be re-entered to confirm that this is the panel to be deleted.

3.2 Additional Polling Options

Accessed using the Server Options menu, information about missed polls and sign up procedure can be selected.



Number of Missed Polls Allowed
The server continually checks for any panels that have stopped sending poll messages. There could be a number of reasons why a panel has stopped sending events like network lag or the internet connection on the panel is down. This option controls how many times a poll is missed before it is reported the automation computer.

Missed Polling Event
The server can output to an automation PC the fact that a panel has stopped polling. The server sends this message as a user defined reporting format message. Contact ID or SIA can be selected as the format to use.

Contact ID
Enter the event number from 000 to 999, the same number is used for the new event and the restore. Take care not to use a number already assigned. Note that if SIA CIS automation protocol is used then this event is automatically converted into the equivalent SIA Level 1 reporting event.

SIA Level 1
Enter the event code to use for both the new event and the restoral. SIA codes are in the range AA to ZZ. Take care not to use a code already assigned.

Important Note: Contact ID only uses 4 digit account codes so if the account codes being programmed in the panels are less are greater than this then only use SIA Level 1 for reporting the Missed Polled events.

Require ARC Account to sign up
As part of the sign up procedure on a control panel there is the option to enter in an account code to use. Select this option to deny access to any control panel trying to sign up with one.

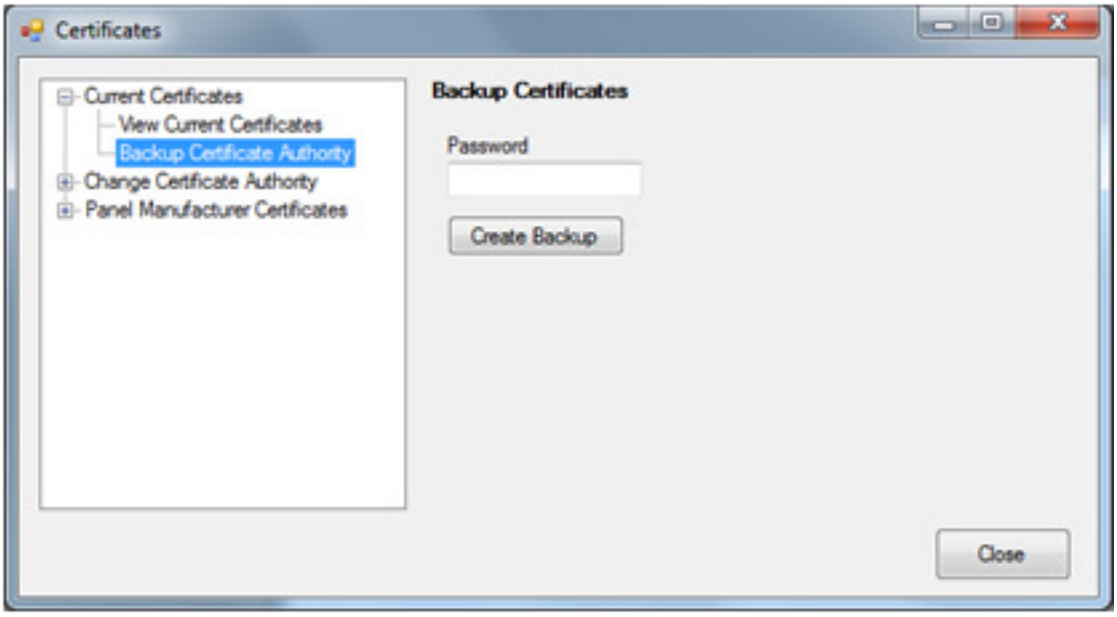
Do not allow same ARC Account
If more than one panel has the same account code it can make identification of control panels difficult. To prevent this situation panels connecting with an account code already in use can be blocked by selecting this option.

3.3 Changing Server Certificates

The certificates used on the server can be viewed, changed and backed up using the Certificates menu option.

3.3.1 Backup Certificates

It is important to create a backup of the server certificate.



Enter a password and press Create Backup.

A backup file is created in the "My Documents" folder of the computer. The software will display the location of the file.

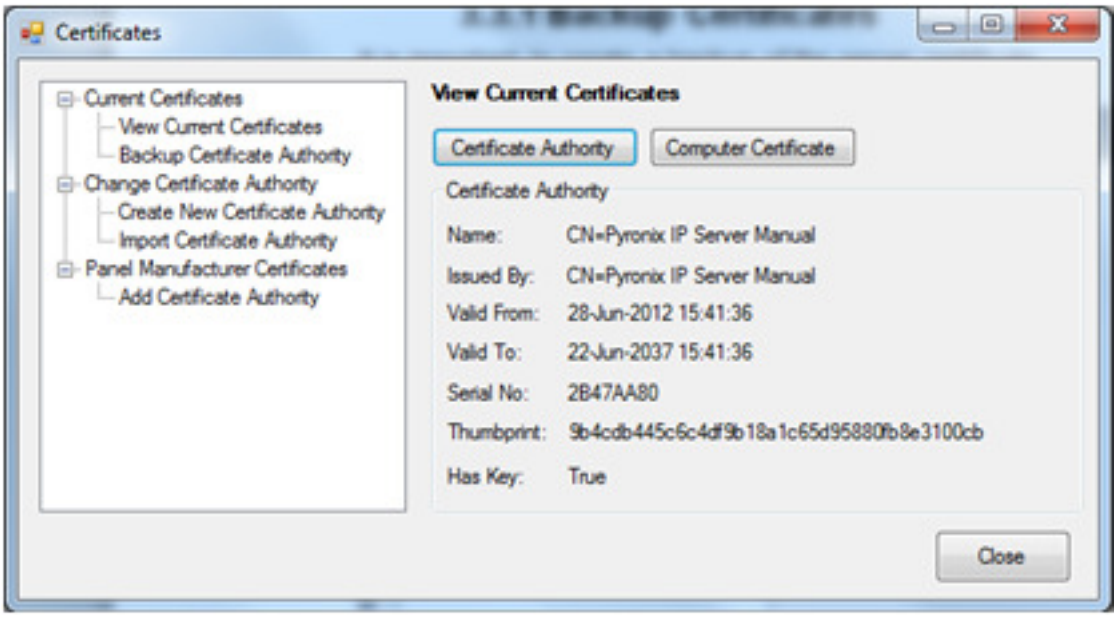
It is important that this file is then copied to another device, either CD, DVD, USB Device or another computer and kept in a safe place. Also remember the password used.

3.3.2 Viewing Certificates

The currently installed certificates can be viewed using this option.

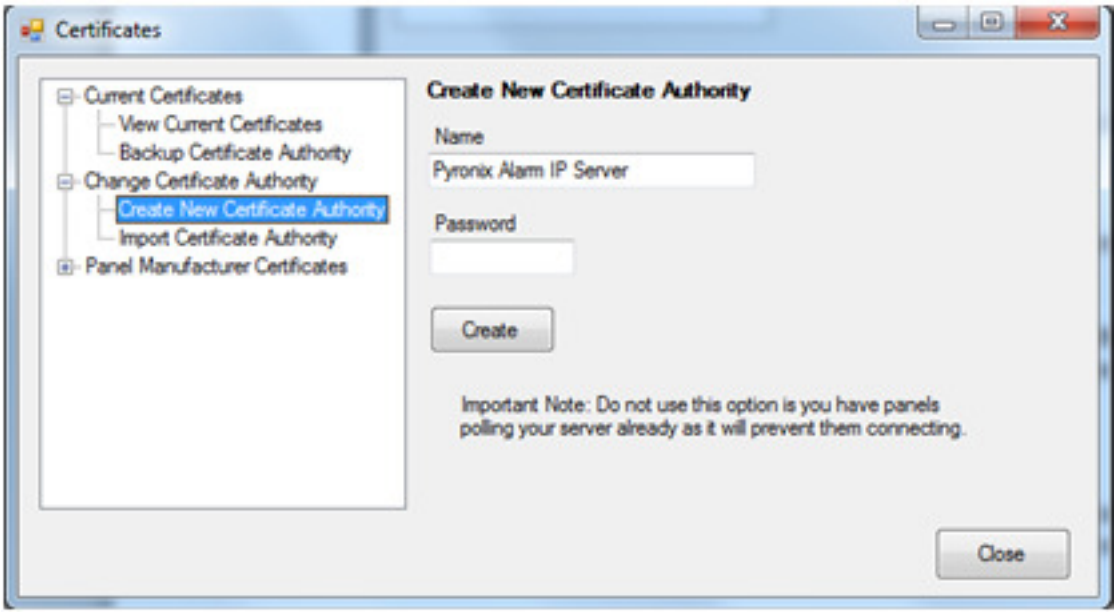
The following information is displayed.

Name
Issued By
Valid From
Valid To
Serial No
Thumbprint
Private Key



3.3.3 Create New Certificate Authority

It is dangerous to create a new certificate authority once the software has been installed, however it can be done from within the software using the procedure below.

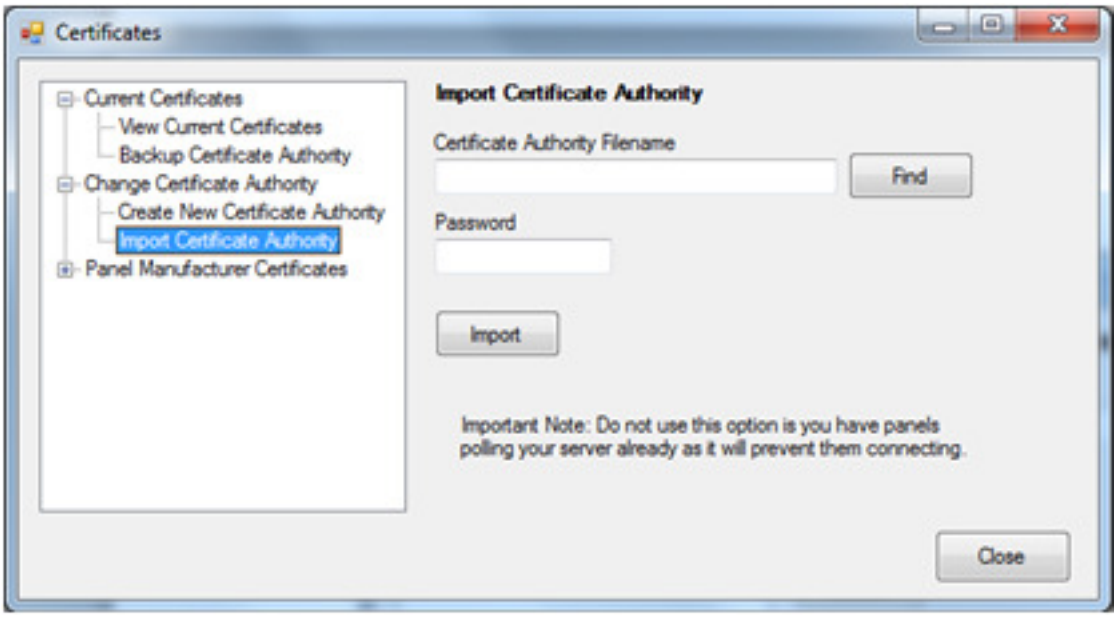


Enter a Name and Password for the new CA and press Create.

The new CA will be created, a backup of the CA will be created and the following message displayed.

3.3.4 Import Certificate Authority

It is dangerous to create a new certificate authority once the software has been installed, however it can be done from within the software using the procedure below.



Press Find to locate the .pfx file on the computer and enter in the Password for the file.

With the file selected press Import and the file will be imported into the software and new certificates created.

Restart the software to use the new Certificates.

Please note any panels connected the server will be unable to connect.

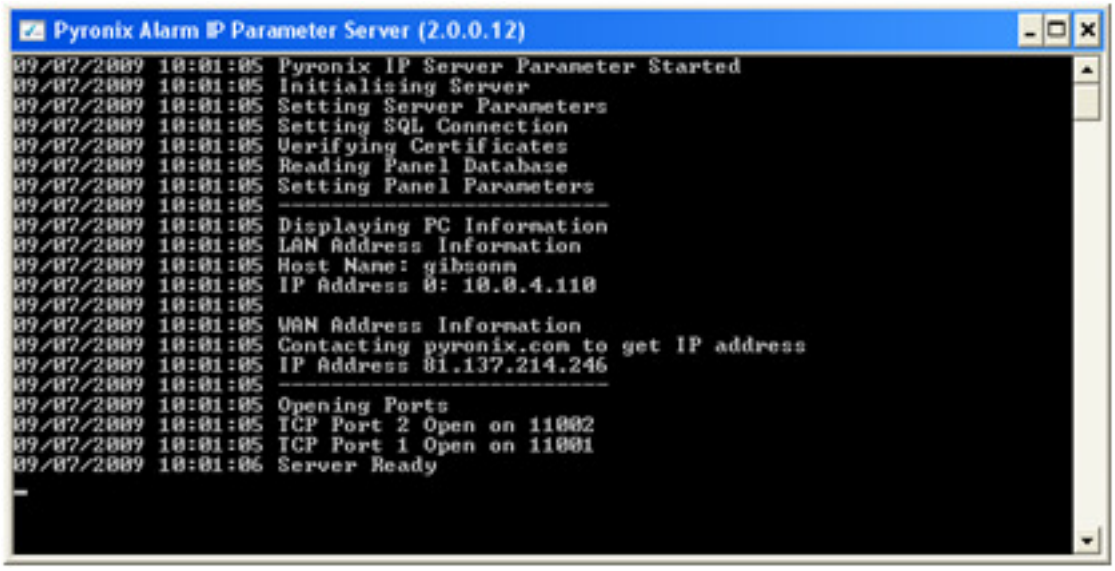
3.4 Parameter Server

The Parameter Server controls the giving out of all polling parameters to panels that use the Alarm IP Server.

The software runs in a command window and is therefore easy to close by mistake. Do not unless it is necessary close this window as this will stop the server from running and will not allow any panels to connect to the server.

To program the settings for this software use the Main Alarm IP Server application, see the Server Options and Server to Panel Parameters sections of this help file. When changes are made to the settings of this software close and restart the software to apply the new settings.

To run this application, double click on the **Pyronix Alarm IP Parameter Server** icon on the desktop.


Pyronix Alarm IP Parameter Server (2.0.0.12)
09/07/2009 10:01:05 Pyronix IP Server Parameter Started
09/07/2009 10:01:05 Initialising Server
09/07/2009 10:01:05 Setting Server Parameters
09/07/2009 10:01:05 Setting SQL Connection
09/07/2009 10:01:05 Verifying Certificates
09/07/2009 10:01:05 Reading Panel Database
09/07/2009 10:01:05 Setting Panel Parameters
09/07/2009 10:01:05 ------------------------
09/07/2009 10:01:05 Displaying PC Information
09/07/2009 10:01:05 LAN Address Information
09/07/2009 10:01:05 Host Name: gibsonn
09/07/2009 10:01:05 IP Address 0: 10.0.4.110
09/07/2009 10:01:05
09/07/2009 10:01:05 WAN Address Information
09/07/2009 10:01:05 Contacting pyronix.com to get IP address
09/07/2009 10:01:05 IP Address 81.137.214.246
09/07/2009 10:01:05 ------------------------
09/07/2009 10:01:05 Opening Ports
09/07/2009 10:01:05 TCP Port 2 Open on 11002
09/07/2009 10:01:05 TCP Port 1 Open on 11001
09/07/2009 10:01:06 Server Ready

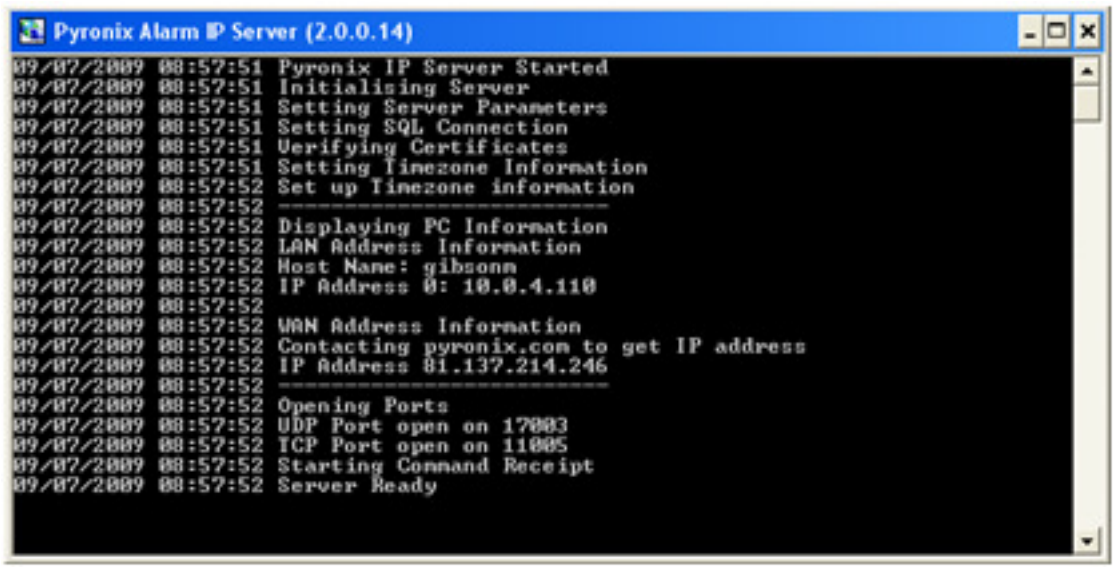
The application displays the IP Addresses that the PC is using. This information can be used when entering the IP Address information into the parameter options.

The application contacts pyronix.com to return the Internet IP address of the PC if it is connected the internet. This feature can be turned off by deselecting the **Contact pyronix.com at start up to show Internet IP Address** option in the Options screen of the Main Application.

3.5 Polling Server

The Polling Server receives all the polling and reporting information for the panels connected to the Alarm IP Server.

The software runs in a command window and is therefore easy to close by mistake. Do not unless it is necessary close this window as this will stop the server from running and will not allow any panels to connect to the server.


Pyronix Alarm IP Server (2.0.0.14)
09/07/2009 08:57:51 Pyronix IP Server Started
09/07/2009 08:57:51 Initialising Server
09/07/2009 08:57:51 Setting Server Parameters
09/07/2009 08:57:51 Setting SQL Connection
09/07/2009 08:57:51 Verifying Certificates
09/07/2009 08:57:51 Setting Timezone Information
09/07/2009 08:57:52 Set up Timezone information
09/07/2009 08:57:52 ------------------------
09/07/2009 08:57:52 Displaying PC Information
09/07/2009 08:57:52 LAN Address Information
09/07/2009 08:57:52 Host Name: gibsonm
09/07/2009 08:57:52 IP Address 0: 10.0.4.110
09/07/2009 08:57:52
09/07/2009 08:57:52 WAN Address Information
09/07/2009 08:57:52 Contacting pyronix.com to get IP address
09/07/2009 08:57:52 IP Address 81.137.214.246
09/07/2009 08:57:52 ------------------------
09/07/2009 08:57:52 Opening Ports
09/07/2009 08:57:52 UDP Port open on 17003
09/07/2009 08:57:52 TCP Port open on 11005
09/07/2009 08:57:52 Starting Command Receipt
09/07/2009 08:57:52 Server Ready

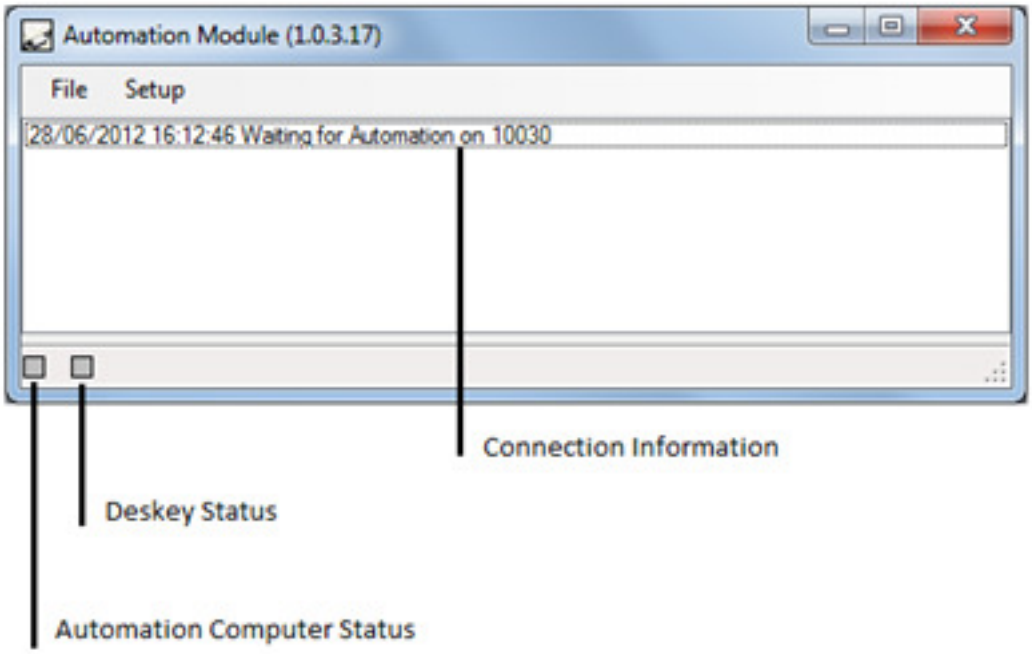
The application displays the IP Addresses that the PC is using. This information can be used when entering the IP Address information into the parameter options.

The application contacts pyronix.com to return the Internet IP address of the PC if it is connected the internet. This feature can be turned off by deselecting the **Contact pyronix.com at start up to show Internet IP Address** option in the Options screen of the Main Application.

4. Automation Module

4.1 Overview

The Automation Module allows for events received by the server to be passed onto a compatible automation computer. At present Surgard, Silent Knight Expanded, Ademco 685 and SIA Computer Interface Standard protocols are supported and can be sent over a TCP or serial connection.



Connection Information
This will show connection information.

Automation Computer Status
This icon will be one of the following colours

Grey – No automation software connected
Green – Automation software connected and working
Red – Automation software error

Deskey Status
In order for events for the sent to the automation software a Deskey dongle must be inserted into the PC. This device is available from Pyronix. This icon will be one of the following colours

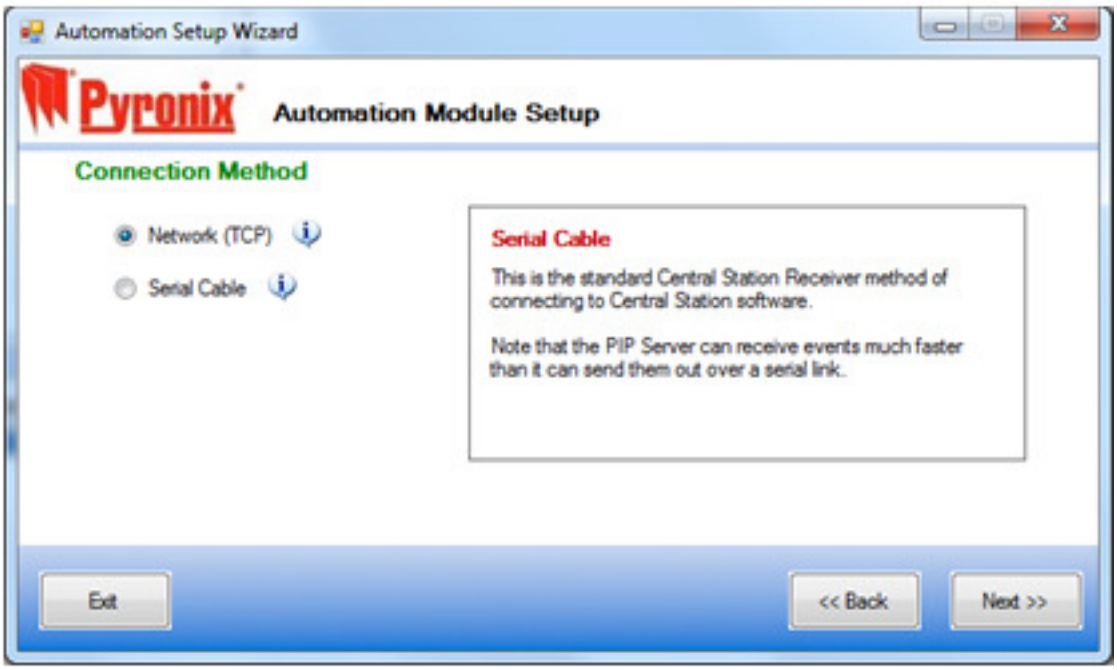
Green – Deskey inserted and working.
Red – No Deskey installed.

4.2 Automation Setup

When launched the software displays an option to run the software or enter the setup wizard.

4.2.1 Automation Connection Method

The Automation Module can connect using TCP or a Serial Cable.

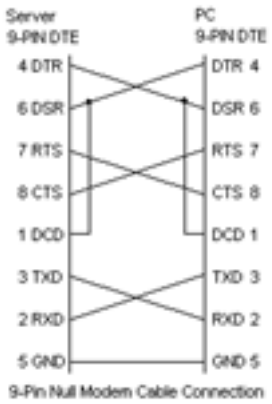

Automation Setup Wizard
Pyronix
Automation Module Setup
Connection Method
Network (TCP)
Serial Cable
Serial Cable
This is the standard Central Station Receiver method of connecting to Central Station software.
Note that the PIP Server can receive events much faster than it can send them out over a serial link.
Exit
<< Back
Next >>

Network (TCP)
If the automation PC supports a TCP connection enter the port to use

Serial Cable
The server can output data over a serial link to an automation PC. Select the Port (all available serial ports that are detected are displayed), Baud Rate, Parity, Data Bits, Stop Bits and Flow Control.

Please note that the server has the ability to receive events over the internet faster than it can send them to the automation PC over a serial link.

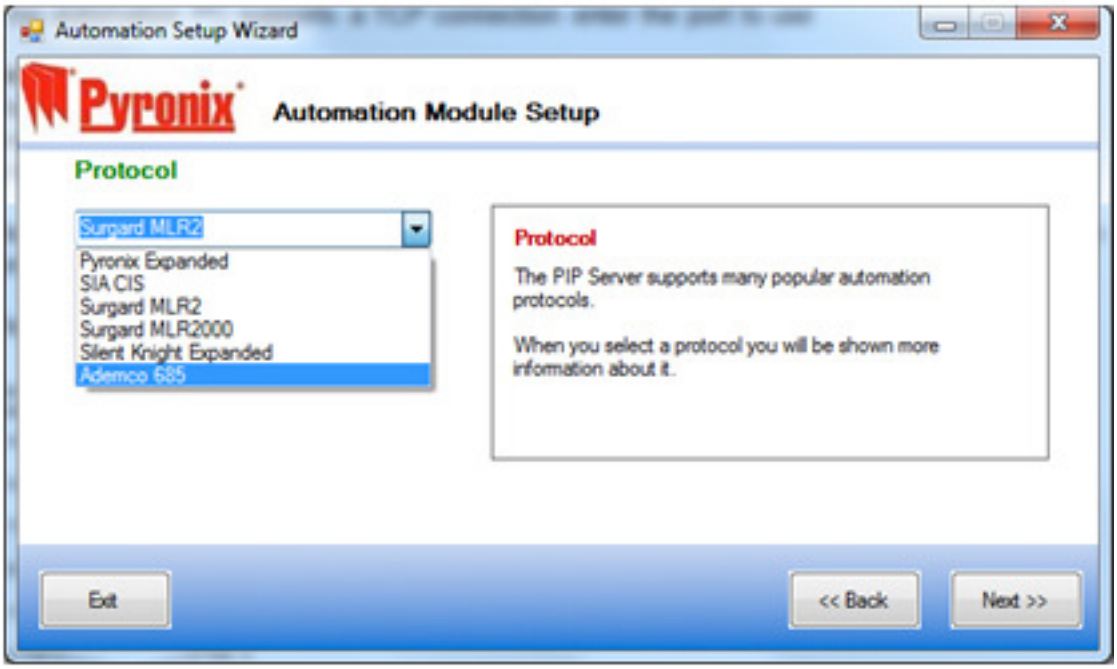
The cable to use is shown in the diagram below.



9-Pin Null Modem Cable Connection

4.2.2 Automation Protocol

The server can output in multiple formats to an automation PC including Silent Knight Expanded, SIA CIS, Surgard and Ademco 685.



The supported automation protocols are

Pyronix Expanded and Silent Knight Expanded
These emulate the Silent Knight 9500 and 9800 receiver protocols.

SIA CIS
This outputs data using the SIA CIS (Computer Interface Standard) June 1990 protocol.

Surgard MLR2
This emulates the Surgard MLR2, SLR and MLR2E receivers.

Surgard MLR2000
This emulates the Surgard MLR2000, System-II and System-III receivers.

Ademco 685
This emulates the Ademco 685 receiver and protocol. See section 4.3.3 Additional Ademco 685 Options for compatibility options for this protocol.

For more information on these protocols view the help file that is available when running the Alarm IP Server and described in Section 6 of this manual.

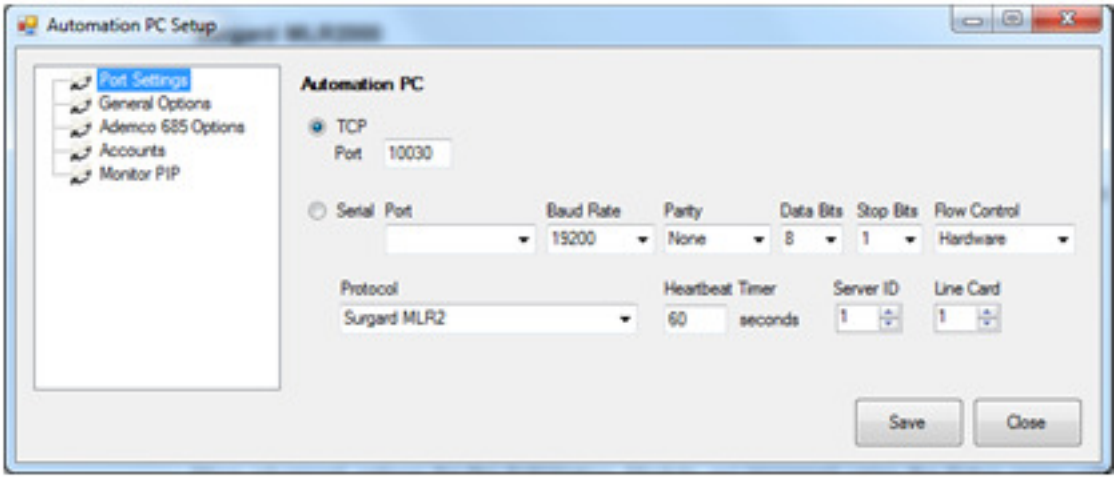
For a complete description of each protocol please view the relevant manuals for the receivers and protocols provided by the manufacturers.

4.3 Additional Setup Options

More advanced options for the Automation Module are accessed using the Setup menu within the software.

4.3.1 Heartbeat Timer and Server Numbers

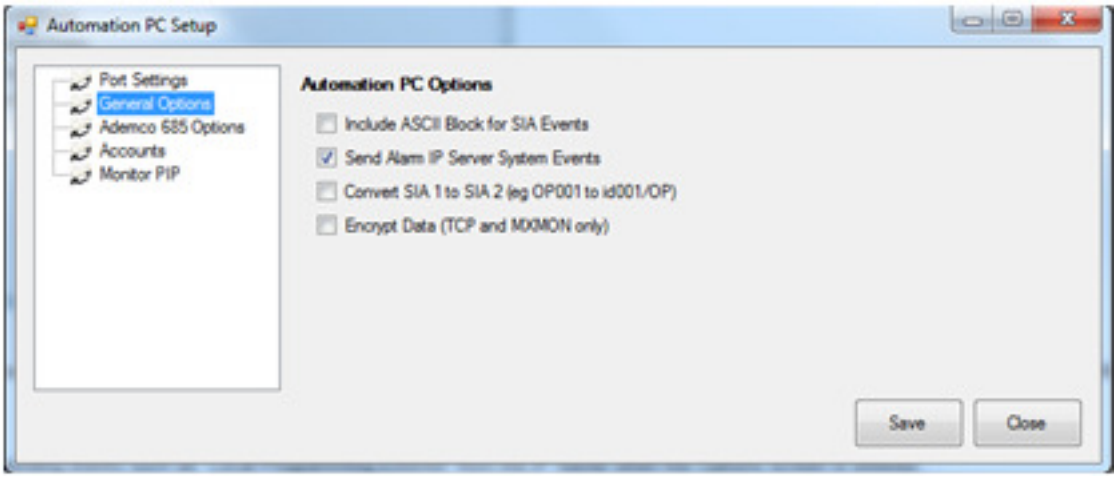
These can accessed through the Port Settings of the Setup Automation PC menu option. On these screen you can also change the Connection Method and Protocol which were described previously.



Heartbeat Timer
A message can be sent to the PC to ensure that the link between the two is still working. Enter in a value in seconds for the frequency of this. A value of 0 (zero) indicates no heartbeat is to be sent.

Server ID and Line Card
This is how the server will identify itself to a connected automation computer. Please note that for some automation protocols only 1 digit can be used for the ID and Line Card number.

4.3.2 General Options



Include ASCII Block for SIA Events
The SIA Protocol allows for additional text to be sent by the panel to the receiver. However some Automation protocols and software do not support the ASCII block contained within the SIA standard. Use this option to make the Automation Module strip this information from the sent report.

Send Alarm IP Server System Events
Un-select this option to stop the IP Server from sending events such as “Local Programming

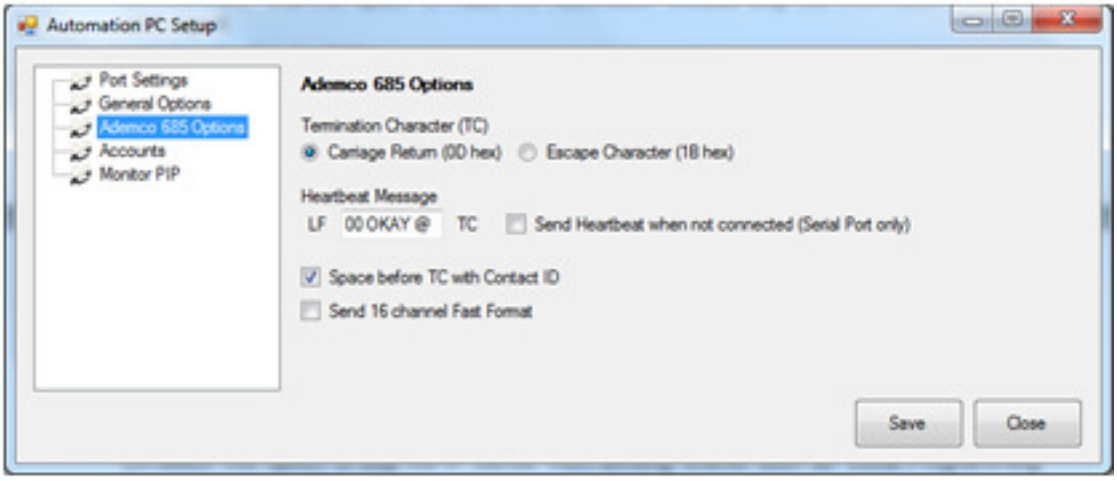
Entered" from the IP Server when the Options screen is entered.

Convert SIA 1 to SIA 2 (e.g. OP001 to id001/OP)
The SIA standard allows for a number of ways to send User, Zone etc. information. Use this option to convert SIA 1 events that send the user/zone information after the 2 letter event code to SIA 2/3 events that use the Modifier Codes. This is to allow some automation software to accept the events, note however that SIA 2/3 events are not converted to SIA 1 events.

Encrypt Data (TCP and MXMON only)
The data sent over a TCP connection to the Pyronix MXMON software can be encrypted. The data is only encrypted using a very basic encryption algorithm and should not be considered a complete solution.

4.3.3 Additional Ademco 685 Options

Within the options screen of the Automation Module there are a number of options that can be changed to improve compatibility with automation software.



Termination Character (TC)
This can be set to either Carriage Return (0D hex) or Escape Character (1B hex)

Heartbeat Message
This always starts with LF (header) and ends with TC (termination character). However, the data sent can be changed from the default which is 00 OKAY @

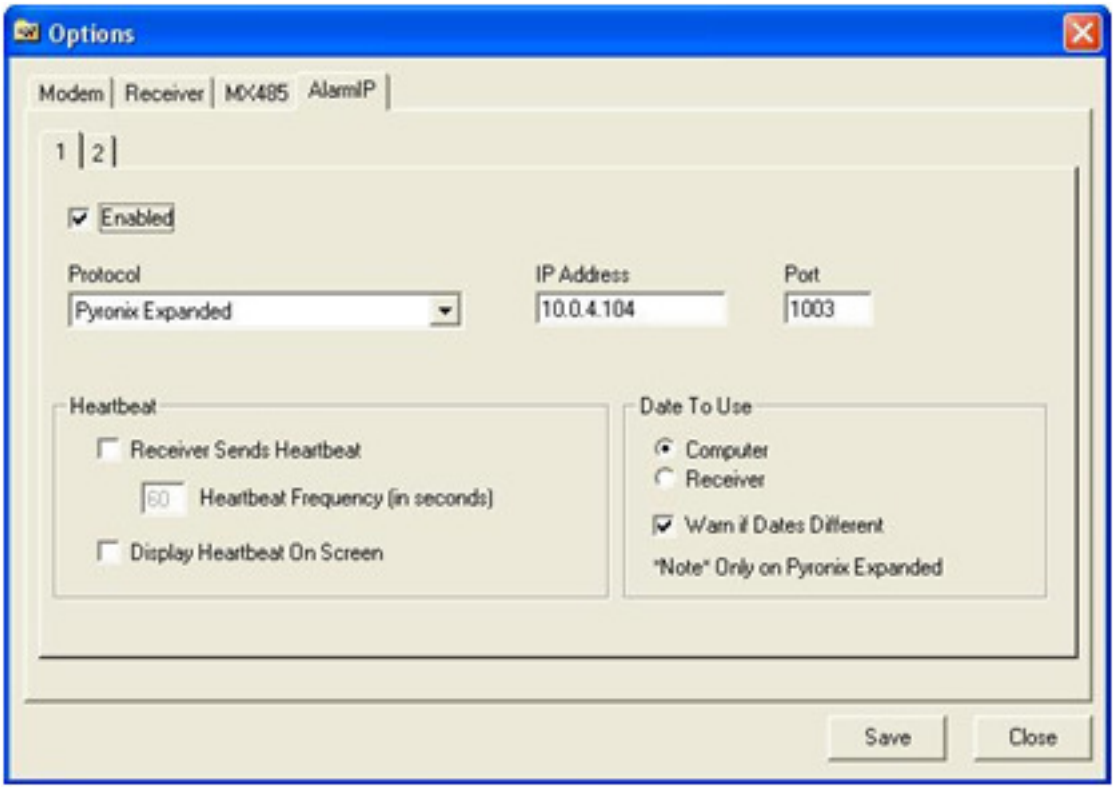
Send Heartbeat when not connected
Continue to try and send the Heartbeat to the automation software

Space before TC with Contact ID
By default the <space> before TC is sent, however it can be removed by unselecting this option.

Send 16 channel Fast Format
If the automation software supports 16 channel fast format then the automation module will send the additional channels.

4.4 Connecting MXMON to the IP Server

Select Tools and then Communications from the menu in MXMON.



To setup an Alarm IP Server select Enabled in the tab labelled 1.

Enter the Protocol, IP Address and Port so that they match the Alarm IP server details.

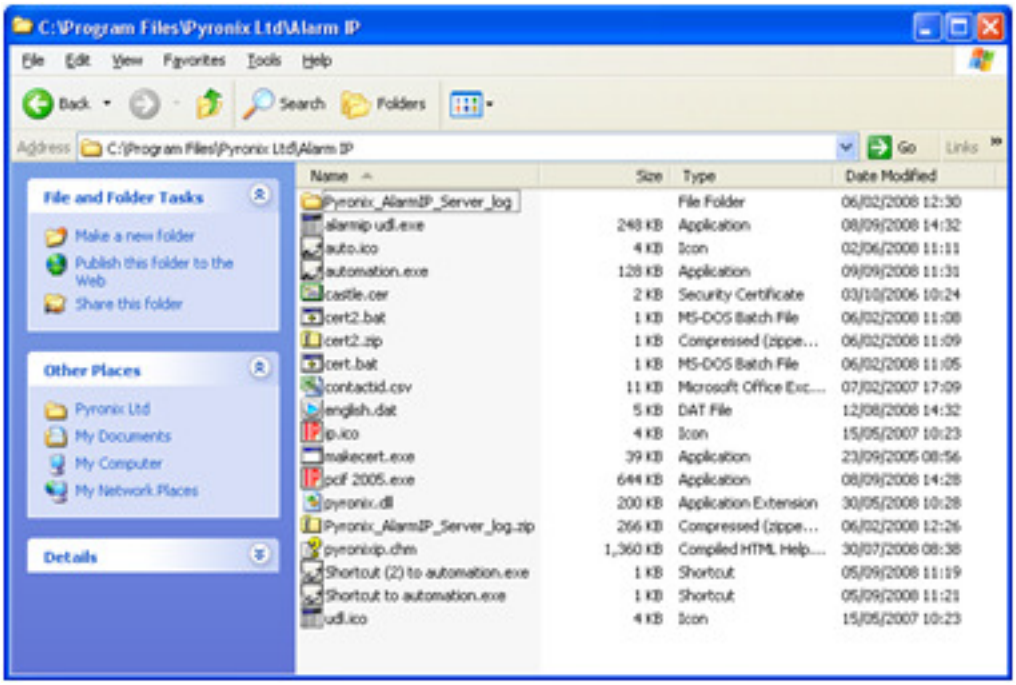
To connect to the Alarm IP server over a serial connection enter the details in the Receiver section as though connecting to a line receiver like a Surgard.

4.5 Running Multiple Automation Modules

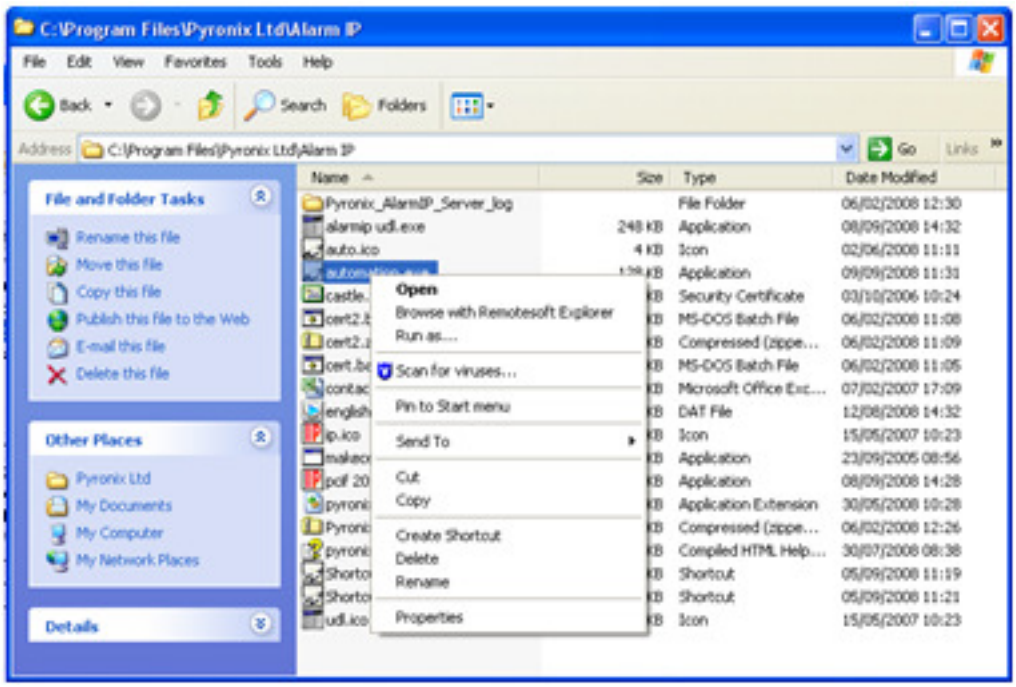
It is possible to run more than one instance of the Automation module. This enables more automation programs to connect to the Alarm IP Server and receive events.

This can be achieved by doing the following steps

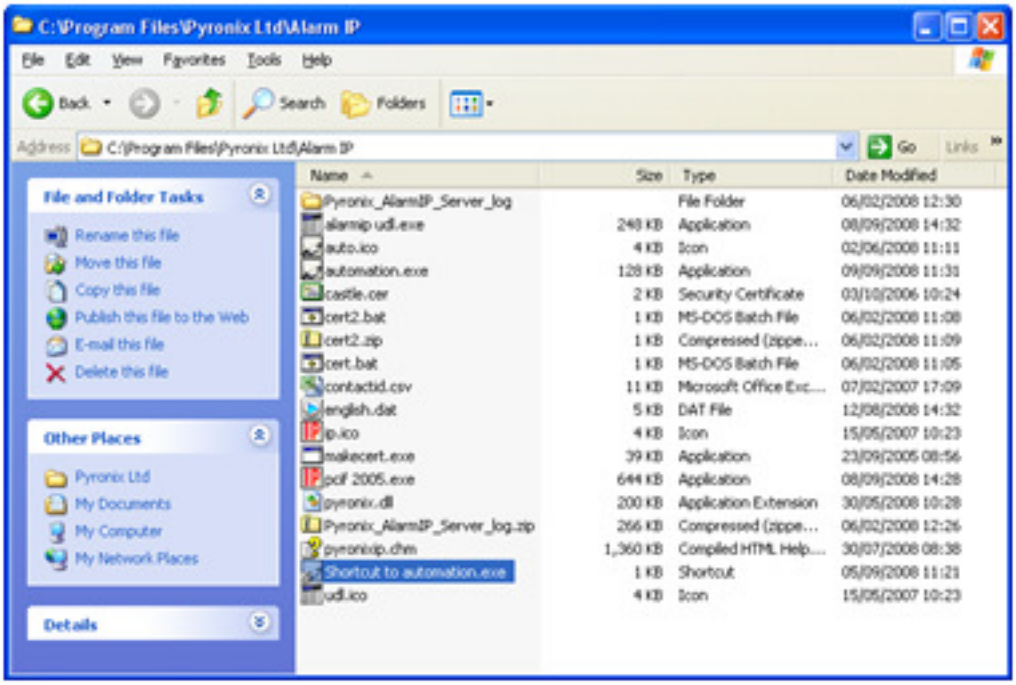
1. In Windows Explorer navigate to the directory " C:\Program Files\Pyronix Ltd\Alarm IP"


C:\Program Files\Pyronix Ltd\Alarm IP
File Edit View Favorites Tools Help
Back Search Folders
Address C:\Program Files\Pyronix Ltd\Alarm IP
Go Links
File and Folder Tasks
Make a new folder
Publish this folder to the Web
Share this folder
Other Places
Pyronix Ltd
My Documents
My Computer
My Network Places
Details
Name Size Type Date Modified
Pyronix_AlarmIP_Server_log File Folder 06/02/2008 12:30
alarmip udl.exe 248 KB Application 08/09/2008 14:32
auto.ico 4 KB Icon 02/06/2008 11:11
automation.exe 128 KB Application 09/09/2008 11:31
castle.cer 2 KB Security Certificate 03/10/2006 10:24
cert2.bat 1 KB MS-DOS Batch File 06/02/2008 11:08
cert2.zip 1 KB Compressed (zippe... 06/02/2008 11:09
cert.bat 1 KB MS-DOS Batch File 06/02/2008 11:05
contactid.csv 11 KB Microsoft Office Exc... 07/02/2007 17:09
english.dat 5 KB DAT File 12/08/2008 14:32
ip.ico 4 KB Icon 15/05/2007 10:23
makecert.exe 39 KB Application 23/09/2005 08:56
pcif 2005.exe 644 KB Application 08/09/2008 14:28
pyronix.dll 200 KB Application Extension 30/05/2008 10:28
Pyronix_AlarmIP_Server_log.zip 266 KB Compressed (zippe... 06/02/2008 12:26
pyronixip.chm 1,360 KB Compiled HTML Help... 30/07/2008 08:38
Shortcut (2) to automation.exe 1 KB Shortcut 05/09/2008 11:19
Shortcut to automation.exe 1 KB Shortcut 05/09/2008 11:21
udl.ico 4 KB Icon 15/05/2007 10:23

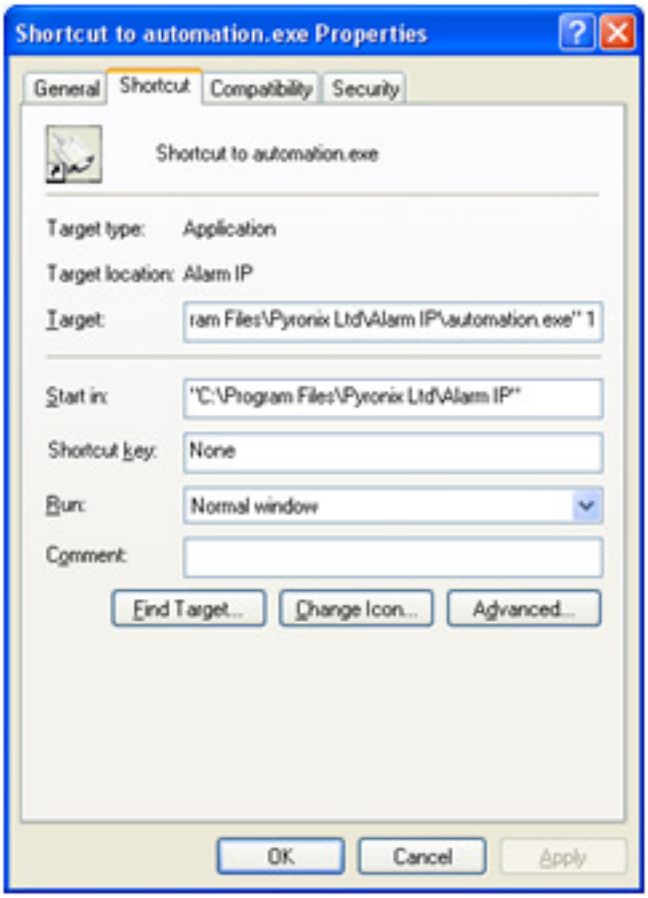
2. Right Mouse click on the file "automation.exe", and select "Create Shortcut"



3. This creates a new file called "Shortcut to automation.exe"


C:\Program Files\Pyronix Ltd\Alarm IP
File Edit View Favorites Tools Help
Back Search Folders
Address C:\Program Files\Pyronix Ltd\Alarm IP
Go Links
File and Folder Tasks
Rename this file
Move this file
Copy this file
Publish this file to the Web
E-mail this file
Delete this file
Other Places
Pyronix Ltd
My Documents
My Computer
My Network Places
Details
Name Size Type Date Modified
Pyronix_AlarmIP_Server_log File Folder 06/02/2008 12:30
alarmip udl.exe 248 KB Application 08/09/2008 14:32
auto.ico 4 KB Icon 02/06/2008 11:11
automation.exe 128 KB Application 09/09/2008 11:31
castle.cer 2 KB Security Certificate 03/10/2006 10:24
cert2.bat 1 KB MS-DOS Batch File 06/02/2008 11:08
cert2.zip 1 KB Compressed (zippe... 06/02/2008 11:09
cert.bat 1 KB MS-DOS Batch File 06/02/2008 11:05
contactid.csv 11 KB Microsoft Office Exc... 07/02/2007 17:09
english.dat 5 KB DAT File 12/08/2008 14:32
ip.ico 4 KB Icon 15/05/2007 10:23
makecert.exe 39 KB Application 23/09/2005 08:56
pcif 2005.exe 644 KB Application 08/09/2008 14:28
pyronix.dll 200 KB Application Extension 30/05/2008 10:28
Pyronix_AlarmIP_Server_log.zip 266 KB Compressed (zippe... 06/02/2008 12:26
pyronixip.chm 1,360 KB Compiled HTML Help.... 30/07/2008 08:38
Shortcut to automation.exe 1 KB Shortcut 05/09/2008 11:21
udl.ico 4 KB Icon 15/05/2007 10:23

4. Right mouse click on this file and select "Properties" and Change the target from "C:\Program Files\Pyronix Ltd\Alarm IP\automation.exe" to "C:\Program Files\Pyronix Ltd\Alarm IP\automation.exe" 1

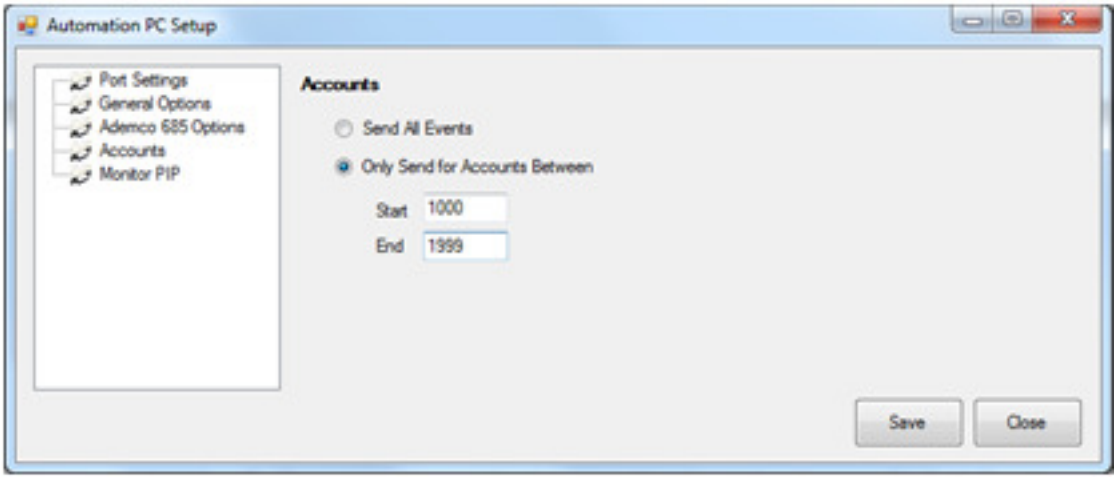


To run more copies repeat the steps but and use a different number, 1 to 9 can be used. This allows up to 10 automation modules to be run on 1 PC.

To start a copy of the automation module run the shortcut.

Each copy of the automation module must be set up to only send out a specific range of Account Codes. In the Setup menu select Accounts and enter in a range of account codes for this copy to use.

IMPORTANT: There cannot be overlapping account codes and neither can Send All Events be selected when running multiple copies. This will cause events to be sent to one random automation program connected to the Alarm IP Server. The software will not send multiple copies of events to multiple automation programs, only one program will "win" and receive the event.



5. UDL Server

5.1 Installing UDL Server

If downloaded from the Internet
Unzip the file **Pyronix UDL Server.zip**. The directory **Pyronix UDL Server** is created. Run the file **setup.exe**. This will install the software.

If installing from a CD
Open the CD with Explorer/My Computer. Run the file **setup.exe** in the directory **Pyronix UDL Server**.

IMPORTANT
Select the same installation directory as the Alarm IP Server previously installed.
The UDL Server will not work unless the Alarm IP Server has been installed.

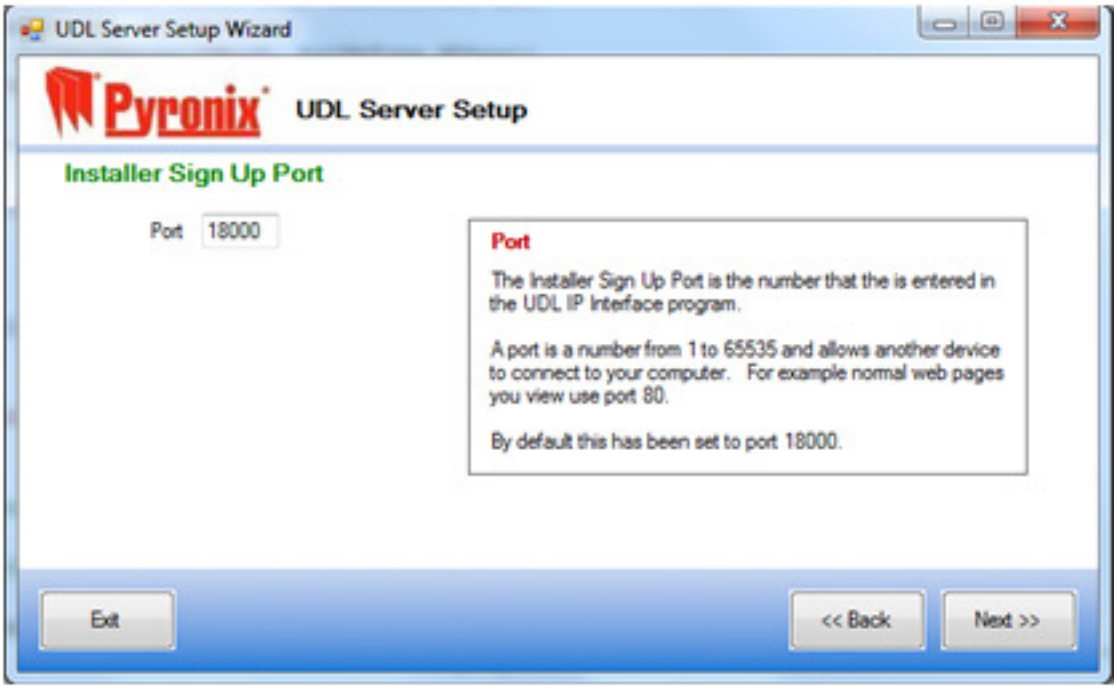
5.2 Setting up UDL Server

In order for the server to work the following must be entered on the UDL Server and the Alarm IP Server.

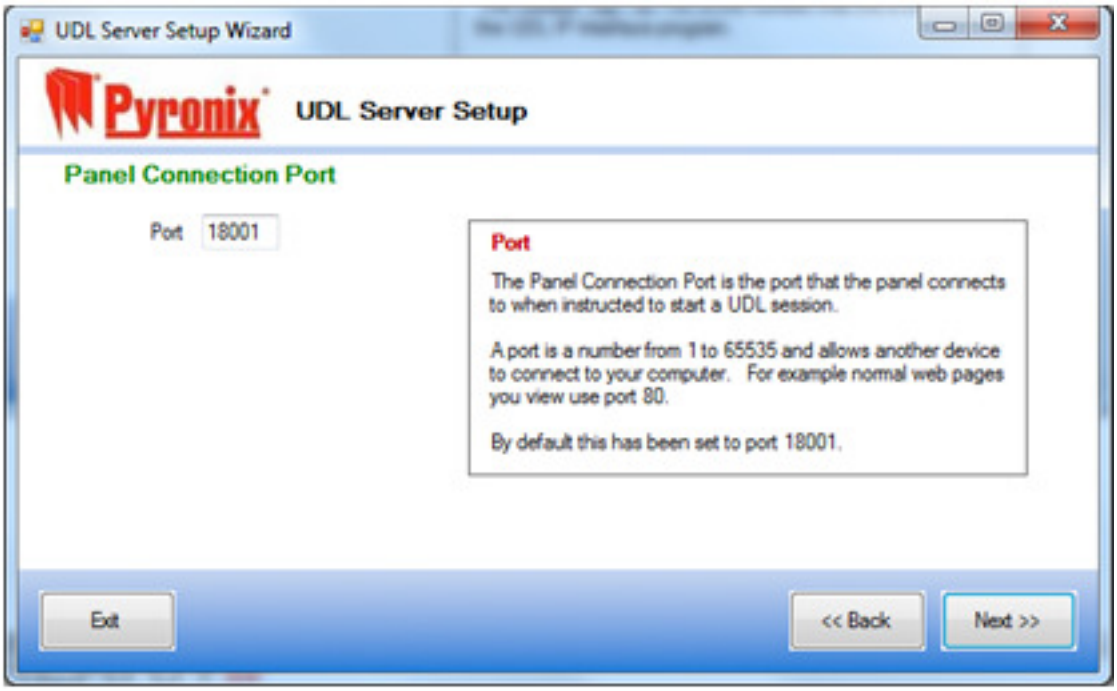
5.2.1 UDL Server Options

The UDL Server has a setup wizard. This can be skipped by pressing Start.

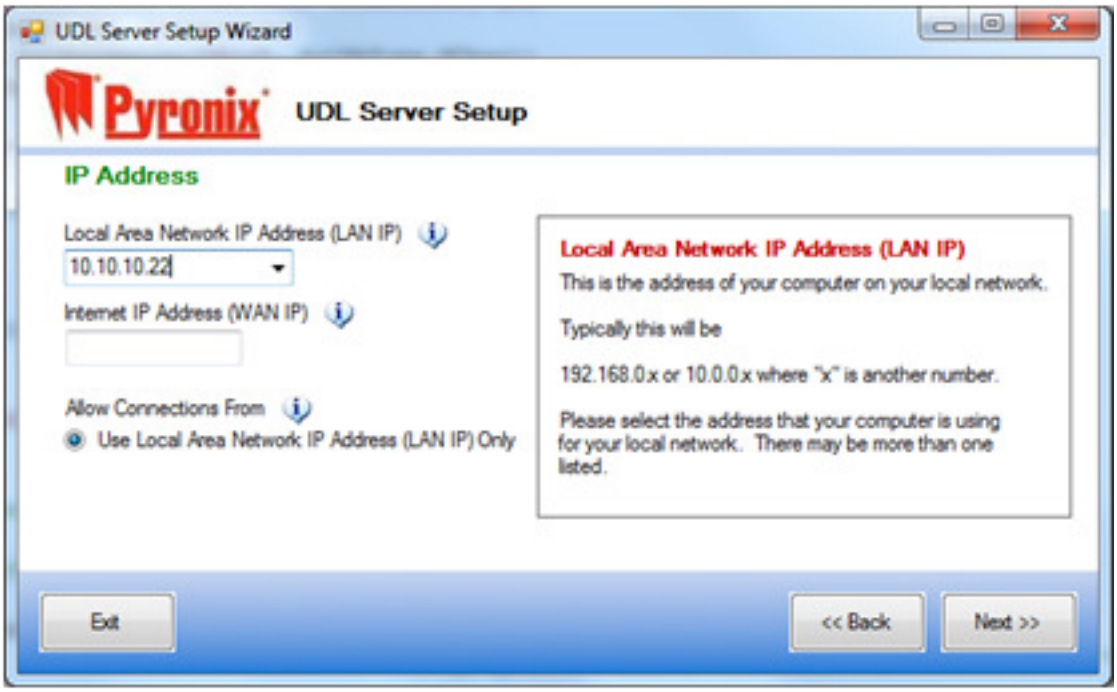
Step 1 is the Installer Sign Up Port. This is the port that is entered in the UDL IP Interface.


UDL Server Setup Wizard
Pyronix
UDL Server Setup
Installer Sign Up Port
Port
18000
Port
The Installer Sign Up Port is the number that the is entered in the UDL IP Interface program.
A port is a number from 1 to 65535 and allows another device to connect to your computer. For example normal web pages you view use port 80.
By default this has been set to port 18000.
Exit
<< Back
Next >>

Step 2 is the Panel Connection Port. This is the port used by the panel when they connect to the UDL Server.


UDL Server Setup Wizard
Pyronix
UDL Server Setup
Panel Connection Port
Port 18001
Port
The Panel Connection Port is the port that the panel connects to when instructed to start a UDL session.
A port is a number from 1 to 65535 and allows another device to connect to your computer. For example normal web pages you view use port 80.
By default this has been set to port 18001.
Exit
<< Back
Next >>

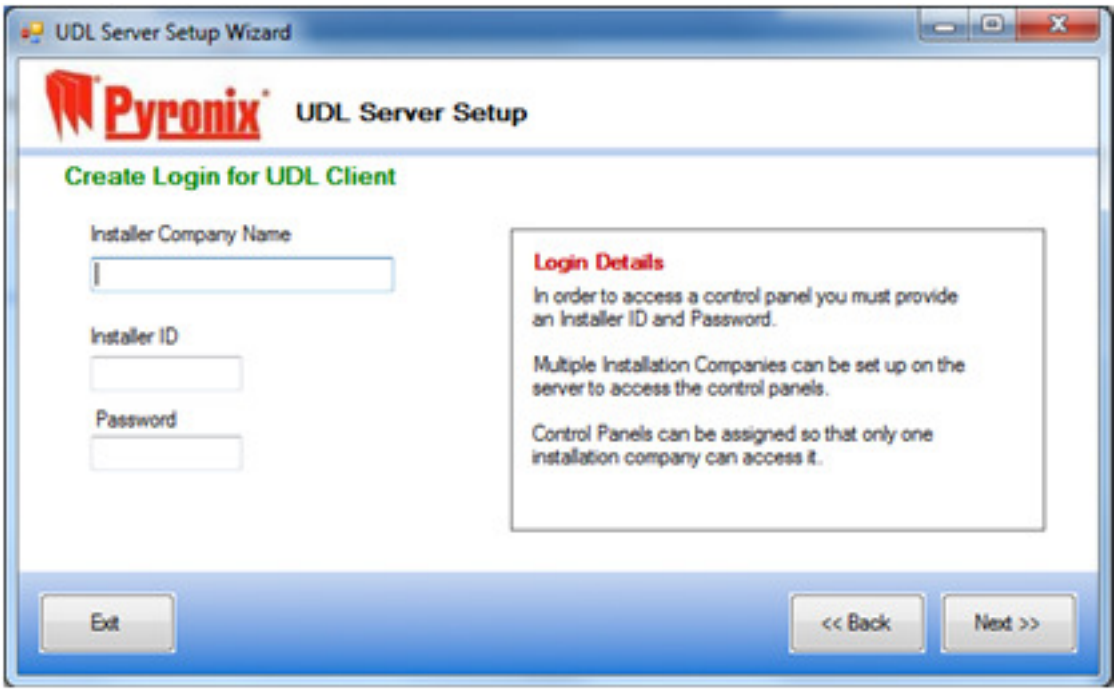
Step 3 sets up the IP Address information.


UDL Server Setup Wizard
Pyronix
UDL Server Setup
IP Address
Local Area Network IP Address (LAN IP)
10.10.10.22
Internet IP Address (WAN IP)
Allow Connections From
Use Local Area Network IP Address (LAN IP) Only
Local Area Network IP Address (LAN IP)
This is the address of your computer on your local network.
Typically this will be
192.168.0.x or 10.0.0.x where "x" is another number.
Please select the address that your computer is using for your local network. There may be more than one listed.
Exit
<< Back
Next >>

In order to connect to the UDL Server an Installer must have an account.

This step allows one customer to be added.

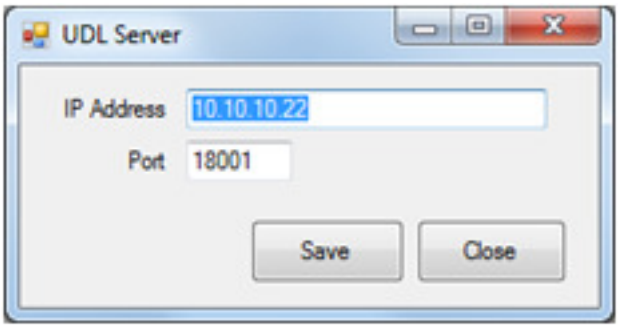
First enter an Installer Company Name, followed by the Installer ID and Password. There can be multiple Installer ID's within a single Installer Company and screen within the UDL Server allow this information to be entered.


UDL Server Setup Wizard
Pyronix
UDL Server Setup
Create Login for UDL Client
Installer Company Name
Installer ID
Password
Login Details
In order to access a control panel you must provide an Installer ID and Password.
Multiple Installation Companies can be set up on the server to access the control panels.
Control Panels can be assigned so that only one installation company can access it.
Exit
<< Back
Next >>

5.2.2 Alarm IP Server Options

The following information need to be entered into the Alarm IP Server. This option can be found in Server Parameters under Setup.

The values entered on this screen should match those entered into the UDL Server.



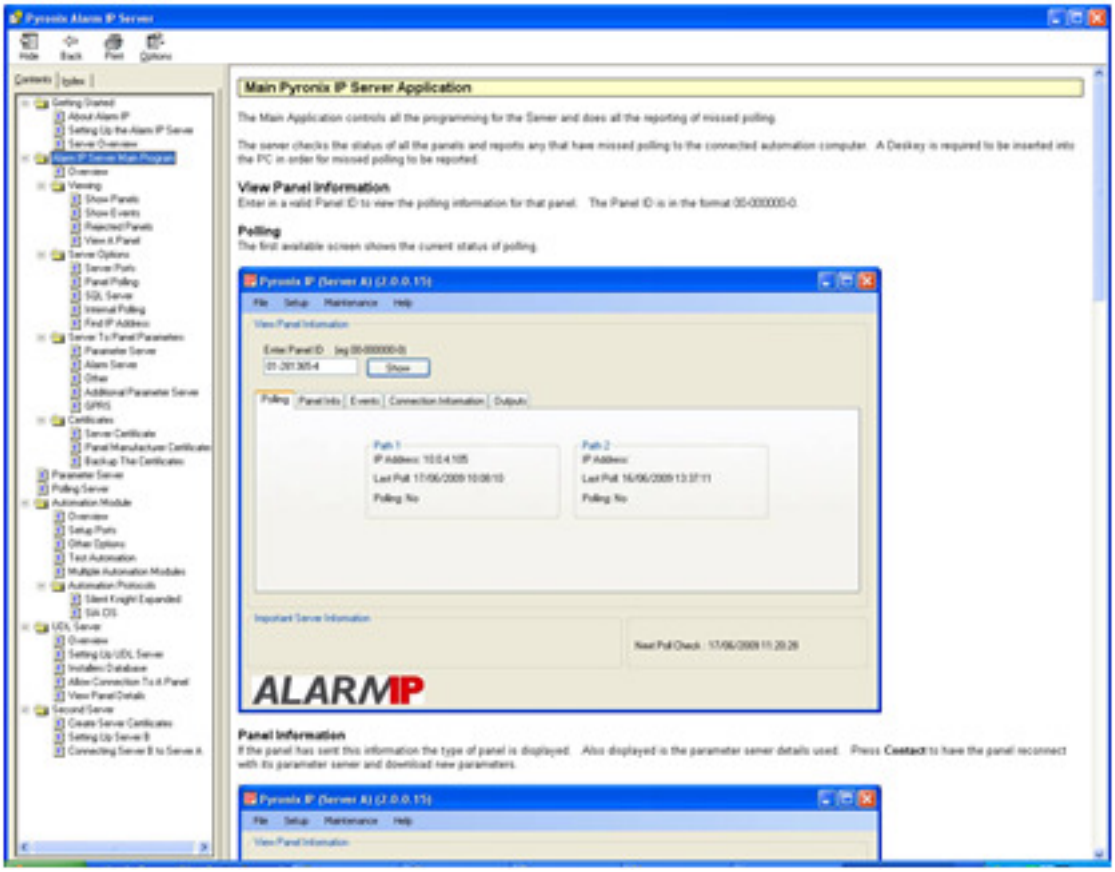
IP Address – Enter the address of the UDL Server. This will be the same address as the Alarm IP Address server.

Port – Enter the same value as entered for the Panel Connection Port in the UDL Server.

6. Help

The Alarm IP Server contains a help system with more information on how to use each piece of software.

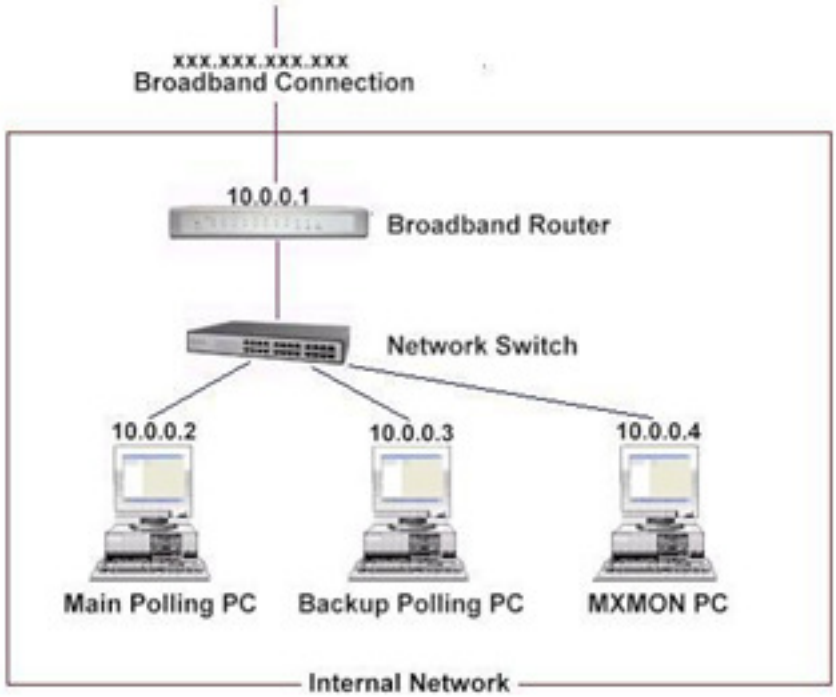
Select Help from the menu if available.



7. Further Information and Tutorials

7.1 An Example Network

This section shows how to set up an example Alarm IP Server.



In this network there are 3 PCs networked together which share a common broadband connection.

Each PC on the network has its own unique IP address. The broadband connection has its own IP Address and any panel wishing to connect to a PC on the network has to use this IP Address (shown on the diagram as xxx.xxx.xxx.xxx).

7.1.1 Static IP Address

A static IP address should be obtained from the Internet Service Provider (ISP) for the broadband connection. This will mean that if your network is disconnected from the Internet it will retain the same IP Address when reconnected. This is very important because the panels connected to the IP Server require it never to change.

The PCs on the internal network should also use Static IP Addresses. In the example above IP addresses in the range 10.0.0.1 to 10.0.0.4 are used.

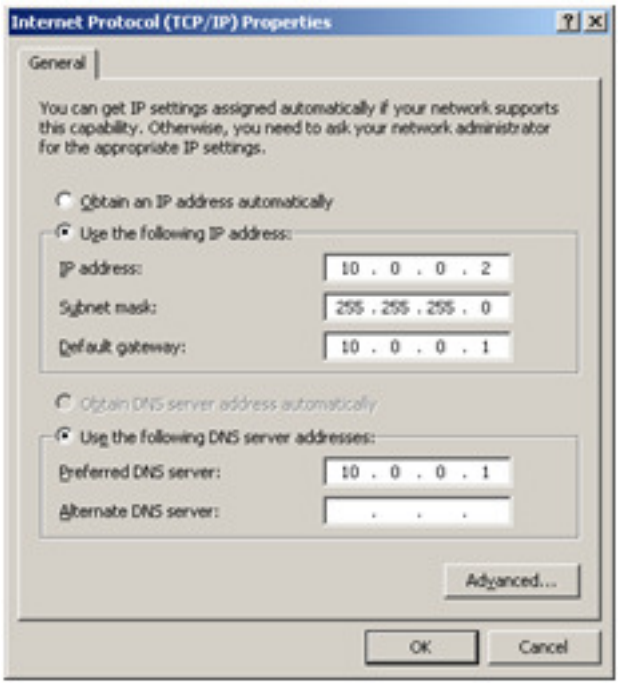
The Broadband Router will have a screen in which the IP Address can be changed as shown on the next page by changing the "1st IP Address" parameter.

Note that different routers will use different screens although the will all the similar. The manual provided with the router should provide information on how to connect and change settings.

To make the PCs on the network use a static IP Address

1. Open **Control Panel**
2. Select **Network Connections** option
3. Double click the connection required from those listed
4. Press **Properties**
5. Highlight **Internet Protocol (TCP/IP)** and press **Properties**
6. Enter in the IP Address information

For the PC shown as "Server A" this information for this network would be as follows


Internet Protocol (TCP/IP) Properties
General
You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.
Obtain an IP address automatically
Use the following IP address:
IP address: 10 . 0 . 0 . 2
Subnet mask: 255 . 255 . 255 . 0
Default gateway: 10 . 0 . 0 . 1
Obtain DNS server address automatically
Use the following DNS server addresses:
Preferred DNS server: 10 . 0 . 0 . 1
Alternate DNS server:
Advanced...
OK
Cancel

7.1.2 Port Forwarding

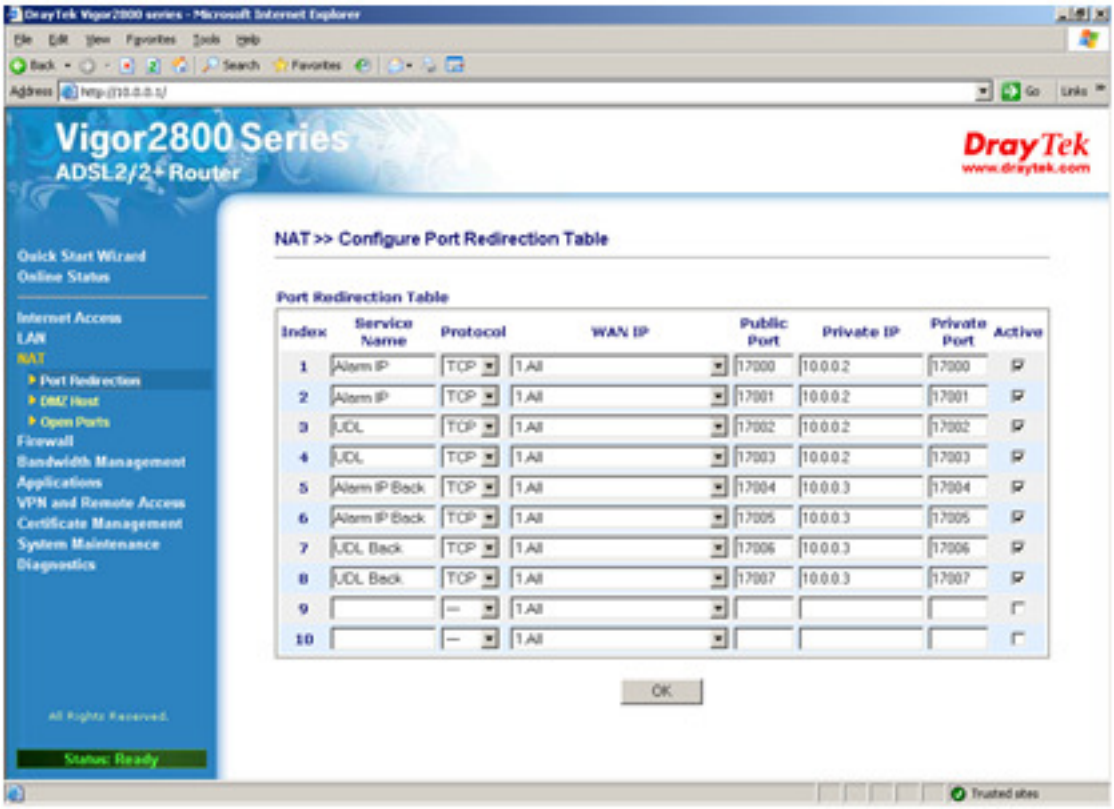
A panel is programmed with the IP address of the internet connection and port forwarding (or Port Redirection) allows panels from the internet to connect to the PCs on the internal network.

For this network using the following port redirections are required.

4 are required for each polling PC, these are

1 for panels to sign up to
1 for panels to poll to
1 for panels to connect to for UDL
1 for installers to connect to for UDL

And this is shown the diagram below

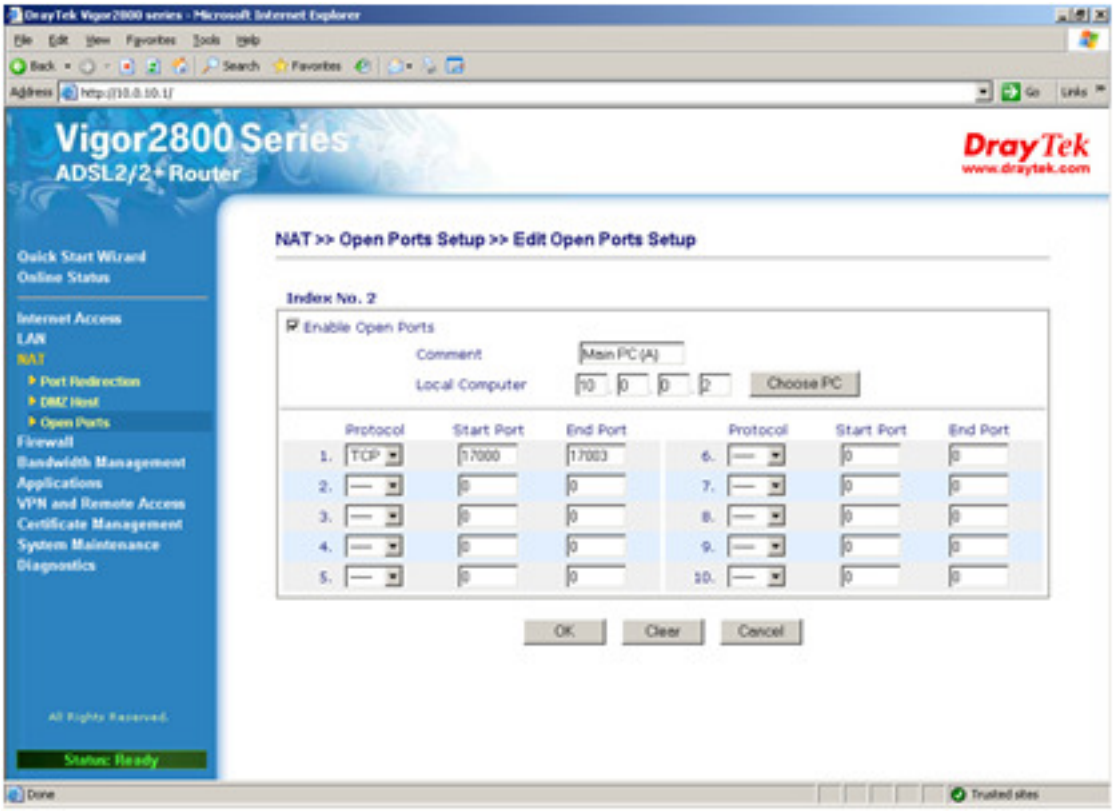


This means any request coming into the router for port 17001 is directed to the PC with the IP Address 10.0.0.2 which is the Server A.

7.1.3 Opening Ports

An alternative to doing Port Redirection is to open up ports on the router. With the router on the example network the Open Ports option is used.

This is shown in the example below where TCP Ports 17000 to 17003 have been assigned to the local computer 10.0.0.2.



7.2 Glossary

Certification Authority (CA)
In cryptography, a certificate authority or certification authority (CA) is an entity which issues digital certificates for use by other parties. It is an example of a trusted third party.

General Packet Radio Service (GPRS)
GPRS is a protocol that allows data to be passed over a mobile network.

IP Address
An Internet Protocol address is a unique address that devices use in order to identify and communicate with each other on a computer network utilizing the Internet Protocol standard (IP)—in simpler terms, a computer address.

Port forwarding
Is the act of forwarding a network port from one network node to another. This technique can allow an external user to reach a port on a private IP address (inside a LAN) from the outside via a NAT-enabled router.

Secure Sockets Layer (SSL) and Transport Layer Security (TLS)
TLS and its predecessor SSL are cryptographic protocols that provide secure communications on the Internet. There are slight differences between SSL and TLS, but the protocol remains substantially the same.

Transmission Control Protocol (TCP)
TCP is one of the core protocols of the Internet protocol suite. TCP provides reliable, in-order delivery of a stream of bytes, making it suitable for applications like file transfer and e-mail. It is so important in the Internet protocol suite that sometimes the entire suite is referred to as "the TCP/IP protocol suite."

User Datagram Protocol (UDP)
UDP is one of the core protocols of the Internet protocol suite. Using UDP, programs on networked computers can send short messages to one another. UDP is sometimes called the Universal Datagram Protocol. UDP does not guarantee reliability or ordering in the way that TCP does.